



Missed Opportunities: The Vaccine Act of 1813

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Missed Opportunities:
The Vaccine Act of 1813

A Paper in Fulfillment of the Third Year Writing Requirement Harvard Law
School

Rohit K. Singla

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Prof. Peter Barton Hutt

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I. Introduction

In February 1813 Congress handily passed and the President enthusiastically signed' a piece of ground-breaking legislation which has been long overlooked by legal historians—An *Act to Encourage Vaccination*.² The Act established a national source for uncontaminated, smallpox vaccine. Without any textual basis in the Constitution, Congress mandated that a Presidentially appointed National Vaccine Agent preserve supplies of genuine vaccine matter and furnish the same to any citizen of the United States, whenever it might be applied for.³ Congress subsidized the distribution of vaccine through a valuable franking privilege, providing free postage to and from the Vaccine Agent.⁴ The Act was passed at the urging of a crusading Baltimore physician, Dr. James Smith who was immediately appointed the first National Vaccine Agent.⁵

By all accounts, the 1813 Act was the first federal government program in our nation's history designed to improve the health and well-being of the general populace.⁶ Smallpox was among the most feared diseases of the 19th century, and the discovery of vaccination in 1798 was widely hailed as a near miraculous medical breakthrough.⁷ In passing the Act, Congress quickly stepped into the moral and social controversies over vaccination⁸ and clearly endorsed its practice. Given the medical technology of the time there was a

See infra text accompanying notes 25 1-259.

² Act to Encourage Vaccination, ch. 37, 2 Stat. 806 (1813) *repealed by* An Act to Repeal the Act to Encourage Vaccination, ch. 50, 3 Stat. 677 (1922).

2 Stat. 806, ~ 1(1813).

2 Stat. 806, § 2 (1813).

See infra text accompanying note 260.

'*See e.g.*, PETER B. HUTT & RICHARD A. MERRILL, FOOD AND DRUG LAW 661 (1991) (first federal experiment in drug regulation); Morris Kagan, *Federal Public Health*, 161. HIS.T. MED. 256, 265, 276-277 (1961) (describing early Federal public health initiatives); Peter B. Hutt, *Investigations and Reports on the Food and DrugAdministration*, in FOOD & DRUG LAW 41, 42 (Richard M. Cooper ed., 1991).

~ *infra* Part II.A-B.

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significant need for vaccine institutions to propagate pure quantities of the vaccine between and during epidemics.⁹ Congress perceived that the private markets would not be able to adequately guarantee a reliable supply of vaccine and remarkably provided in 1813 for a semipublic source for vaccine.

Given the state of scientific knowledge, there was not much the federal government could have previously done to promote the public health other than enforce quarantines. The national government had quickly enacted Quarantine Acts,¹¹ and Congress was admonished by President Jefferson in 1805 to be alert to the need to preempt state laws with federal Quarantine laws.¹² Vaccination, however, presented the government with a unique opportunity. The Act represents the response of the federal government to its first significant chance to act in the interests of the public health and welfare, to save countless lives. The Act is also one of the first episodes in the federal government's growing intervention into the American economy and society to promote the General Welfare during the first century of the Republic. Today, we take the Centers for Disease Control, the Food and Drug Administration, and similar agencies for granted; public health institutions are one of the most respected sectors of the Federal bureaucracy. In the early 19th century, however, federal establishment of a public health program was quite an innovation. The

See infra Part II.C.1.

⁹ *See infra* Part II.C.3.

¹⁰ *See generally*, WILSON SMILLIE, PUBLIC HEALTH: DEVELOPMENT OF PUBLIC HEALTH IN THE UNITED STATES, 1607-1914, at 111-270 (1955) (quarantine and general urban sanitation were the only known public health measures in the ante-helium period).

See Act Relative to Quarantine, ch. 31, 1 Stat. 474 (1796) *repealed* by Act Respecting Quarantines & Health Laws, ch. 12, ~ 8, 1 Stat. 619-21 (1799). For a brief description of these quarantine laws see Kagan, *supra* note 6, at 264.

¹² In his 1805 State of the Union, speaking with regards to an unnamed epidemic which struck port cities that year, President Jefferson admonished Congress that Although the health laws of the States should be found to need no present revival [sic] by Congress, yet commerce claims that [Congress'] attention be ever awake to them. Thomas Jefferson, Fifth Annual Message to Congress (Dec. 3, 1805) *in* 15 ANNALS OF CONG. 11-12 (1805).

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efforts of the National Vaccine Agent may have led to the vaccination of 50,000 Americans a year.³

Despite the foresight shown by Congress in passing the Act, the 1813 Act highlights one of the major public policy failures of 19th century American government. In the early 19th century, smallpox vaccination was not the peripheral public policy issue it is today. Vaccination had the potential to save tens of thousands of lives. Though the potential of smallpox vaccination was well understood in this country by 1801, obstacles to effective implementation of vaccination in this country were not surmounted until the end of the century. There was a great need for a reliable national source of genuine smallpox vaccine, yet the Act itself was repealed after only nine years in the wake of a fatal accident and public scandal.⁴ The country was left without an authoritative national source of trustworthy vaccine. Congress refused to seriously address the issue again for 80 years. Moreover, state governments were also silent for most of the 19th century; they refused to spend money to promote vaccination.⁵ By any modern standard—economic, moral, or otherwise—the American government clearly failed in not imitating the efforts of European governments by funding vaccination efforts and ensuring a reliable supply of vaccine.

Smallpox, thus, took a terrible, largely unnecessary toll in the United States during the 19th century. Tens of thousands of lives were needlessly lost as a result of governmental inaction. European countries had shown the United States that smallpox deaths were wholly unnecessary. A House committee observed that by 1810 Denmark had practical eliminated smallpox by implementation compulsory vaccination; vaccination in Prussia had reduced

˘ See *infra* text accompanying notes 312-314.

See *infra* Part VII.

˘ See *infra* Part III.

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smallpox's toll from 14% of all deaths, to only 1% of all deaths. The committee reported similar results in Bavaria, Lombardy, Geneva, and South America. 17 Small amounts of money could have had enormous benefits.¹⁸ By the Civil War, the United States had also seen the benefit of intensive vaccination programs for Native Americans. Without any hereditary immunities, the Old-World diseases had taken a terrible toll on Native Americans.¹⁹ A comprehensive federal vaccination effort was remarkably successful, however.²⁰ By the second-half of the 19th century smallpox mortality rates among Native peoples was a fraction of that among the non-native population.²¹ Not surprisingly, the rest of the country did not experience declines in smallpox incidence until state governments finally began actively promoting vaccination at the end of the century.²² The central government finally enacted a permanent legislative program to ensure the safety of the vaccine supply in 1902.²³ This Paper's account of government activity up to 1827 should be understood against the general 19th century failure of American governments to effectively implement vaccination.

See H.R. REP. No. 17-48 (1822).

¹⁷For the history of vaccination in Europe, see FRANK FENNER ET AL., SMALLPOX AND ITS ERADICATION 271-73 (1988).

¹⁸For example, the New York Kine-Pox Dispensary vaccinated the poor at a cost of about 75¢ per patient. See 1 JOHN DUFFY, HISTORY OF PUBLIC HEALTH IN NEW YORK CITY 247 (1968). James Smith requested only \$1500 annually to support the preservation of genuine vaccine at his National Vaccine Institution and the free universal distribution of vaccine through the mail. See *infra* Part V.

~ FENNER ET AL., *supra* note 17, at 23 8-240.

²⁰Federal efforts to vaccinate Native Americans began in earnest with Act to Provide the...

Benefits of Vaccination. .. to the Indian Tribes, ch. 75, 4 Stat. 514 (1832) (authorizing payments of \$6 per day for doctors who were vaccinating Indians; the Secretary of War was obligated to provide these doctors with genuine vaccine). The federal governments efforts to vaccinate Native Americans were probably motivated by the horrific toll taken by smallpox on the Native population and feelings of paternalism.

²¹See FENNER ET AL., *supra* note 17, at 240.

²²But see FENNER ET AL., *supra* note 17, at 328-29 (decreasing mortality, though not incidence, beginning

at end of century because of shift to less fatal strain of the disease).

²³Biologics Act, 32 Stat. 728 (1902) *reenacted by* Public Health Service Act, 58 Stat. 682, 702 (1944) *now codified at* 42 U.S.C. ~ 262.

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As far as I know, this paper is the first detailed examination of the Vaccine Act and related history. Despite being the first federal effort to tackle a national health and safety issue, the Vaccine Act has received negligible attention from legal historians. While histories of federal drug regulation or federal public health initiatives discuss the Act in passing,²⁴ broader legal and regulatory histories do not even mention the Act.²⁵ Even histories of smallpox and public health pass over the Vaccine Act.²⁶ The oversight is understandable: the Act was repealed after only nine years;²⁷ records of the Act's legislative history and implementation are scarce;— and by modern standards, the Act's provisions were quite modest. The 1813 Act may also have been overlooked because its history does not fit well into standard historical accounts of 19th century American government.

Nineteenth century legal histories typically assert that the federal government entirely refrained from actively intervening into American economy and society until the Interstate Commerce Act and the Sherman Act. But these accounts are simply wrong to imply that the norm of federal intervention spontaneously sprang-forth in the 1880s.²⁹ Reading these accounts, one is left with the idea that, aside from debates over slavery, ante-bellum Congresses was wholly unconcerned with economic inequality and public safety. However, from the earliest decades of the Republic, Congress enacted government programs designed to

24 The most substantial history of the Act I have found is a two-page discussion in William P. Pendergast, *Biologic Drugs*, in FOOD & DRUG LAW 303, 305-06 (Richard M. Cooper ed., 1991). For other brief accounts see Hutt, *supra* note 6, at 42; HUTT & MERRIL, *supra* note 6, at 660-61.

25 See, e.g., Robert L. Rabin, *Federal Regulation in Historical Perspective*, 38 Stan. L. Rev. 1189, 1196-7

(1986); LAWRENCE FRIEDMAN, A HISTORY OF AMERICAN LAW 177-201 (1985); STEPHEN G. BREYER & RICHARD B. STEWART, ADMINISTRATIVE LAW AND REGULATORY POLICY 13-29 (1985); BERNARD SCHWARTZ, ADMINISTRATIVE LAW (1991).

26 See, e.g., FENNER ET AL., *supra* note 17; SMILLIE, *supra* note 10; Hodge, *Implementing Modern Public Health Goals Through Government*, 14J. CONTEMP. HEALTH L & POLICY 93 (1997).

27 The Act was repealed in 1822 after a public scandal. See *infra* Part V.

28 See *infra* text accompanying note 50.

29 See, e.g., Rabin, *supra* note 25, at 1194-96, and other sources cited in note 25.

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intervene in public life to promote the well-being of *specific* communities: protecting sailors from exploitation,³⁰ enforcing quarantines in port cities,³¹ providing free medical care for sailors by taxing ships to support a marine hospital service,³² granting land for an institution to care for the deaf and dumb,³³ and providing health care for Indians.³⁴ The 1813 Vaccine Act was the first federal program aimed at the *general* populace, but immediately after the repeal of the Vaccine Act, Congress began consideration of another program aimed at the welfare of the general public—regulation of the safety of steamboats.³⁵ This paper is a modest attempt to begin to set the record straight by describing the history of one of these early federal efforts.

Under most of the standard theories of the 19th century role of the government in the economy and *society*—*laissez-faire* capitalism,³⁶ business subsidy, ~ public choice theory,³⁸

³⁰ See, e.g., Act of July 20, 1790, ch. 29, 1 Stat. 13 1-35 (1790).

~ See, *supra* note and text accompanying note 11.

³² See, e.g., Act for the Relief of Sick & Disabled Seamen, ch. 77, 1 Stat. 605-06 (1798). For brief descriptions of the legislation and its enactment, see RALPH. C. WILLIAMS, *THE US PUBLIC HEALTH SERVICE 1798-1950*, at 28-31 (1951); Kagan, *supra* note 6, at 276.

~ See Revised Stat. of the U.S. §~ 4859-69 (1878).

~ See *supra* note and text accompanying note 20.

~ See Act to Provide for the Better Security of the Lives of Passengers..., ch. 191, 5 Stat. 304-06 (1938) *amended by* ch. 105, 10 Stat. 61-75 (1852). For descriptions of the steamboat regulations, see John G. Burke, *Bursting Boilers and the Federal Power*, 7 *TECH. & CULTURE* 1 (1966); Louis C. HUNTER, *STEAMBOATS ON WESTERN RIVERS* 520-546 (1949); JOHN MORRISON, *HISTORY OF AMERICAN STEAM NAVIGATION* 59 1-615 (1903). While Rabin has recognized the role of the steamboat regulations as a precursor to later federal programs, see Rabin, *supra* note 25, at 1196, an authoritative exploration of the steamboat regulations awaits.

³⁶ The idea that the century after the publication of *Wealth of Nations* was marked by a deeply held commitment to *laissez-faire* government has enjoyed surprisingly popularity over the years. See, e.g., JONATHAN LURIE, *THE CONSTITUTION AND ECONOMIC CHANGE* 19 (1988); Morton Keller, *The Pluralist State*, in *REGULATION IN PERSPECTIVE* 56, 56-59, 64-69 (Thomas K. McCraw ed., 1981); GEORGE DARGO, *LAW IN THE NEW REPUBLIC* (1983). See also BREYER & STEWART, *supra* note 25, at 13-29 (1992) (acknowledging that *laissez-faire* capitalism is the dominant explanation for the inactivity of the

19th century federal government); William J. Novak, *Public Economy & The Well-Ordered Market*, 18 *LAW & SOC. INQUIRY* 3-7 (1993) (asserting that historians have generally seen Adam Smith's rhetoric as dominant ideology between the Revolution and the Civil War); HERBERT HOVENKAMP, *ENTERPRISE AND AMERICAN LAW* 1-5 (1991).

~ The strict *laissez-faire* argument was largely debunked by scholars who

uncovered extensive state government support of private enterprises throughout the 19th century. See OSCAR AND MARY F. HANDLIN, *COMMONWEALTH* (1969); JAMES WILLARD HURST, *The Release of Energy in* LAW AND THE CONDITIONS OF FREEDOM IN THE NINETEENTH-CENTURY UNITED STATES (1956). *See also* Harry N.

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salus populi,³⁹ federalism⁴⁰ we would not even predict that Congress in 1813 would enact legislation like the Vaccine Act. These theories also have difficulty accounting for the apathy of state governments and Congress' repeated refusal to devote funding to vaccination. The primary goal of this paper is not to examine each of these theories or persuasively explain the behavior of American governments towards smallpox. The inability of these theories to explain the story of the Act is simply suggestive of the complexity of early 19th century legal history.

Schieber, *Property Law, Expropriation, and Resource Allocation by Government, 1789-1910* (1973) reprinted in AMERICAN LAW & THE CONSTITUTIONAL ORDER 132 (Lawrence M. Friedman, et al. eds., 1978) (To be sure, the once-vigorous myth of ante-bellum laissez-faire has been discarded). Building on this body of work, Morton Horowitz famously proposed that the entire 19th century legal order was designed to maximize the wealth of a new class of industrial entrepreneurs. See MORTON J. HOROWITZ, THE TRANSFORMATION OF AMERICAN LAW, 1780-1860 (1977). Horowitz's legal regime would obviously not be expected to concern itself with public health and safety; if anything, Horowitz's thesis predicts decreasing protection of consumers as industrialists gained power.

³⁸ The public choice theory of regulation arose out of a seminal economics article by George J. Stigler, *The Theory of Economic Regulation*, 2 BELL J. OF ECON. & MGMT. SCI. 3 (1971); see also Richard Posner, *Theories of Economic Regulation*, 5 BELL J. OF ECON. & MGMT. SCI. 335 (1974). For a good review article see, Robert D. Tollison, *Regulation and Interest Groups*, in REGULATION: ECONOMIC THEORY AND HISTORY 59 (Jack High ed., 1991). Economists over the past quarter century have come to view all democratic government action as the product of interest groups exchanging votes and campaign donations for narrow legislative advantage. Even health and safety regulations are thought to be enacted at the request of dominant producers to raise barriers to entry and growth for smaller producers. Public choice theorists reject the idea that the public interest, or any other ideology, drives government actions. Even the elimination of slavery is explained as the result of powerful financial interests. See Anderson, Rowley, and Tollison, *Rent Seeking and the Restriction of Human Exchange*, J. OF LEG. STUDIES 17 (1988). Cf GABRIEL KOLKO, RAILROADS AND REGULATION (1965) (similar argument from leftist historian regarding origin and development of ICC).

Recently, William Novak has persuasively made the case that the Horowitz business subsidy depiction of the 19th century legal order is incomplete. Novak argues that state and local governments, in fact, extensively regulated the economy to protect consumers and promote the general welfare. He uses the slogan *salus populi suprema lex*, 'the welfare of the people is the highest law, to capture this spirit. See

WILLIAM J. NOVAK, THE PEOPLE'S WELFARE (1996). However, many of the market regulations Novak emphasizes might conceivably have actually served business interests a la public choice theory.

~ The least controversial explanation for the limited 19th century role of the national government looks to contemporaneous interpretations of the limited grant of Congressional power. See, e.g., FRIEDMAN, *supra* note 25, at 177 et seq. (the federal government was not *laissez-faire*, but was strongly committed to federalism); HOVENKAMP, ENTERPRISE & AMERICAN LAW 1836-1937, at 80-82 (1991); Harry Scheiber, *Redesigning the Architecture of Federalism*, 14 YALE J. REG. 227, 227-239 (1996); Kagan, *supra* note 6, at 256. The conventional wisdom has it that early Congresses did not believe that they were free to promote the general welfare of the populous; only the states were believed to be so free.

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The applicability of *laissez-faire* capitalism is undermined not only by Congress' swift and painless enactment of the 1813 legislation and the serious consideration given to major expansions of the Act,⁴¹ but also by the total absence of the ideology from debates over encouragement of smallpox vaccination between 1809 and 1827.⁴² The very enactment of the Vaccine Act also questions the prevailing wisdom regarding views of federalism in the early 19th century. There is no explicit grant of Congressional power to justify the Vaccine Act,⁴³ yet the Act was quickly and painlessly passed by Congress in 1813. It appears that public health and safety might not, as has commonly been supposed, have been the sole province of state governments. Further state governments more even more reluctant than the national government to get involved. Though the rhetoric of federalism was deployed in debates over the extension of the Act and its repeal, there are good reasons to question the sincerity of that rhetoric. Upon close analysis, the rhetoric of federalism was used simply to legitimate other substantive differences.⁴⁵ Though the 1813 Act seems to fit William Novak's recent characterization of 19th century local governments as deeply committed to the principle of *salus populi suprema lex*, the inaction of state authorities thoroughly belies the *salus populi*

~ See *infra* Parts IV and V. The Vaccine Act did not provide neutral rules of road but was a conscious effort to affect social change.

⁴² The *laissez-faire* argument does not even appear in the legislative debates until 1882. See *infra* text accompanying notes 480-482.

Arguably the Congressional power "To Establish Post-Offices authorized the grant of the franking privilege in the Vaccine Act. U.S. CONST. Art. I, ~ 8, cl. 7. But there is no textual basis for the rest of the Vaccine Act which demands that the National Vaccine Agent permanently maintain a supply of genuine vaccine and distribute the vaccine upon request to all Americans.

See *infra* Part III.

Then, as now, federalism was a convenient principled cover for essentially political differences. President Madison's biographer, for example, questions the sincerity of Madison's explanation for his veto of Calhoun's Bonus Bill. The Bonus Bill would have allocated the \$1,500,000 paid by the First Bank of the United States for its charter to internal improvements of canals and roads. Madison claimed that this allocation exceeded the national government's powers, yet he had enthusiastically supported the Vaccine Act. Madison's resort to federalism to oppose the Bonus Bill does not appear to have been principled. See 6 IRVING BRANT, JAMES MADISON: COMMANDER IN CHIEF 415-417 (1961); see also David N. Mayer, *Justice Clarence Thomas and the Supreme Court's Rediscovery of the Tenth Amendment*, 25 CAP. U. L. REV. 339, 358-359 (1993).

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thesis. State governments were surprisingly apathetic to the suffering of their own citizens and reluctant to expend resources to support vaccination and save lives.

The business subsidy and public choice theories are at least partially persuasive. Dr. James Smith, the immediate beneficiary of the Act, does not fit the bill of a business or entrepreneurial interest. He certainly did not consider vaccine production to be a serious business enterprise. Indeed, there were structural impediments to vaccine production even being a profitable business.⁴⁷ Moreover, there is no record of medical or physicians groups ever petitioning or lobbying Congress.⁴⁸ Because the production of vaccine was not a legitimate business prospect the reluctance of state governments to get involved supports both the public choice and business subsidy theses, but for the same reasons it is difficult to explain the passage of the 1813 Act itself. Congress granted Smith franking privilege without any political or financial inducements. It is possible that Congress in 1813 considered itself to have granted Dr. Smith a franchise' similar to those given to road and bridge companies.⁴⁹

I would emphasize again that the purpose of this paper is not to rigorously apply the above historical theories. Instead, this Paper simply exposes discontinuities between the theories and the history of the Vaccine Act, suggesting lines of further study. The focus throughout this Paper is on getting the facts right, i.e., thoroughly recounting the history of the Vaccine Act. Part II of the paper provides some necessary historical background regarding the horrors of smallpox, the breakthrough of vaccination, and the difficulties encountered in implementing vaccination in early 19th century America. In particular, the problem of maintaining a steady supply of vaccine is described. Part III analyzes the very limited role

~ See *infra* Part HI. It should be noted that some local, i.e. municipal, governments did make substantial efforts to encourage vaccination. See *infra* text accompanying notes 186-191.

~ See *infra* text accompanying notes 170-175. 48 See *infra* text accompanying note 443.

See infra text accompanying notes 280-28 1.

~ *See* AMERICAN STATE PAPERS, Class 10 (MISC.), vol. 2, doc. 371 et. seq. (1834).

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assumed by state and local governments in the opening decades of the 19th century. Part IV deals at length with the legislative history of the 1813 Act itself including historical explanations for the Act and public opposition to Dr. Smith. Part V discusses Congressional efforts between 1816 and 1820 to expand the scope of the Vaccine Act. Part VI details the facts of the Tarboro Tragedy and the analyzes the causes of the ensuing repeal of the Vaccine Act in 1822. Part VII very briefly recounts two later 19th century efforts to revive the idea of a National Vaccine Institution. Part VIII contains a brief conclusion.

It should be noted that this paper places significant reliance on the published and unpublished documents of James Smith, the major proponent of the Vaccine Act and the National Vaccine Agent because other sources of information for these matters are scarce. There is little extant legislative history for the Vaccine Act and related state and federal bills. Unlike the Constitutional Convention and the first Congresses, detailed records of Congressional debates between 1810 and 1827 are not available. The *Annals of Congress*, a predecessor to the *Congressional Globe*, provides little more than summaries of procedural matters; detailed descriptions of debates are available only for extraordinary issues. The select committees of the era did not hold public hearings, and the few reports issues were generally quite perfunctory. Some legislative history can be discerned from the memorials through which individuals often presented their positions to Congress. Moreover, many House records were burned when the capital was sacked by the British in 1814.~~ The proceedings of state legislatures of the era are even more difficult to locate.

One final historical caveat: unlike modern Congressional practice, very few bills were introduced in early Congresses and the majority were eventually enacted into law. In the

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14th Congress (1815-1817), for example, out of 465 measures introduced, 298 were passed. ~ Similarly, in the 15th Congress (1817-1819) out of 507 measures introduced, 257 were enacted.⁵² Thus, the attention paid to unenacted bills in these Congresses is not unwarranted. Any proposal which was actually introduced into Congress in the early 19th century had a serious chance of passage and was given due consideration.

II. Historical Background: Smallpox, the Discovery and Difficulties of Vaccination, and the Response of State and Local Governments

It is difficult today to appreciate the importance of smallpox vaccination in the

early 19th century. Epidemic diseases, like smallpox, were not the peripheral issues they are today; they were a central fact of early American life. Though smallpox was not a leading cause of death, the virus struck with such ferocity and killed so many, so quickly, and so painfully that for centuries the smallpox virus was one of the most frightening predators of man.⁵³ Smallpox was an important concern of 19th century governments not just because of the fear it aroused, but more importantly because smallpox deaths were preventable. In 1798 a safe, effective vaccine for smallpox was discovered; miraculously smallpox had been conquered, at least in theory. Before vaccination could be effectively implemented, however, a number of hurdles needed to be overcome: public antipathy, the cost of vaccination, and, most importantly, the production of a reliable supply of vaccine. Surprisingly, most states failed to enact measures to ensure they reaped the benefits of vaccination. The failure of state

~ See BUREAU OF THE CENSUS, HISTORICAL STATISTICS OF THE UNITED STATES, COLONIAL TIMES TO 1970, at 1082 (series Y189,192) [hereinafter HISTORICAL STATISTICS].

⁵² See *id.*

Smallpox might be compared to AIDS in this regard, drawing much more attention than the mortality rates would predict because of the frightening nature of the disease.

⁵⁴JAMES SMITH, PROSPECTUS OF A PERMANENT NATIONAL VACCINE INSTITUTION 2 (1818) *microformed on* Early American Imprints, Second Series, Fiche 45728 (Readex).

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governments provided the federal government with its first significant opportunity to save thousands of lives.

A. Smallpox: The King of Terrors

Though it was not the leading cause of death, smallpox aroused tremendous fear among early Americans.⁵⁵ *Endemic* diseases, i.e. diseases which continuously afflicted the population, like dysentery, typhus, scarlet fever, and particularly tuberculosis (consumption), caused many more deaths than *epidemic* diseases like smallpox.⁵⁶ Nonetheless, because epidemic diseases dramatically swept through cities without warning and quickly killed large numbers, they naturally drew more public attention and alarm than deadlier endemic diseases.⁵⁷ For 19th-century Americans living in towns or cities. . . fire and epidemic disease

made up two up the most constant, catastrophic threats to safety and well-being.⁵⁸ In his excellent history of the public health of New York City, John Duffy notes that epidemic diseases were discussed at great length in newspapers, medical journals and meetings of the municipal authorities.⁵⁹ Epidemic diseases were the only public health issue the federal government even addressed in the early decades of the Republic.⁶⁰

For general history of smallpox and its eradication, the authoritative work is FENNER ET AL., *supra* note 17. For a discussion of smallpox in America, see *id.* at 209-244.

⁵⁶ See DUFFY, *supra* note 18, at 583-84 (death rates for New York City from various causes 1800-1850).

~ See *id.* at 446; SMILLIE, *supra* note 10, at 125 (Although the pestilential diseases of cholera, smallpox, and yellow fever were held in horror by the people, the real enemies which were producing the enormously high death rate caused little concern).

⁵⁸ NOVAK, *supra* note 39, at 55.

~ See DUFFY, *supra* note 18, at 446.

⁶⁰ See, e.g., *supra* statutes cited in note 31; Thomas Jefferson, Fifth Annual Message to Congress (Dec. 3, 1805) in 15 ANNALS OF CONG. 11-12 (1805) (admonishing Congress to pay attention to need the to possibly revise state health laws to combat epidemic fevers); and, of course, the Vaccine Act of 1813 itself.

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Even among epidemic diseases smallpox was a distant third behind cholera and yellow fever in its death toll. Nonetheless, smallpox incited a unique fear. Smallpox was not confined to the lower classes like some epidemic diseases; it was feared by wealthy and slum-dwellers alike.⁶² Now that three generations have passed since Americans suffered from the disease, it is easy to forget that smallpox was long called the King of Terrors.⁶³ Smallpox epidemics caused more fear and social disruption than any other disease well into the 19th century.⁶⁴ The Pennsylvania Senate in 1809 summarized the prevailing opinion: smallpox was universally acknowledged to be the most destructive plague that affects mankind.⁶⁵

During the 18th century, smallpox rampaged through Europe and America. The New York Medical Society estimated that before the cow-pox vaccine was discovered in 1798 forty thousand persons died annually... in Great Britain and Ireland; that in twenty-five years, Europe has lost fifteen millions of inhabitants... Nor was the New World immune to the scourge of smallpox; if anything the perception of Congress was that in America the natural Small Pox had proved proportionably [sic] more destructive than in Europe.⁶⁶ Smallpox ravaged cities like New York and Boston throughout the century.⁶⁷ According to contemporary newspaper accounts, the smallpox epidemic of 1731 killed 5%-8% of New York

⁶² See DUFFY, *supra* note 18, at 583-84; SMILLIE, *supra* note 10, at 118.

⁶³ See DUFFY, *supra* note 18, at 451.

⁶⁴ See *id.* at 57.

⁶⁵ Susan Craddock, *Sewers and Scapegoats: Spatial Metaphors of Smallpox in 19th Century San Francisco*, 41

SOC. SCI. & MED. 957 (1995) (commenting on San Francisco epidemics of 1868, 1876, 1881, and 1887).

⁶⁶ 20 J. OF SENATE OF PENN. 1809-1810, at 317 (1810) *microformed on* Early American Imprints, Second Series, Fiche 21023 (Readex).

⁶⁷ MEDICAL SOCIETY OF THE COUNTY OF NEW YORK, REPORT ON THE EPIDEMIC SMALL POX AND CHICKEN POX 25 (1816) *microfo,-med on* Early American Imprints, Second Series, Fiche 38214 (Readex).

⁶⁸ *Id.* See also FENNER ET AL., *supra* note 17, at 238-240.

⁶⁹ See, e.g., DUFFY, *supra* note 18, at 55-58 (smallpox mortality rates throughout 18th century New York City); SMILLIE, *supra* note 10, at 24-30 (chronicling epidemics in Boston, New York, and Charlestown).

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City's population in three months.⁶⁹ In 1752, Boston lost 3.6% of its population in five months.⁷⁰ And, the Colonial Army suffered even greater losses during the War of Independence.⁷¹ Even if dysentery killed more people than smallpox day-in and day-out, it is not surprising that people feared more a disease which wiped out 5% of a city in the space of three months.

Though the practice of variolation⁷² had tamed some of the disease's ferocity,⁷³ smallpox remained a major cause of death in 19th century. A House Committee in 1822 claimed that 50,000 people died annually in Great Britain from smallpox, twenty years after the discovery of vaccination.⁷⁴ Dr. James Smith, the National Vaccine Agent, noted that the number of deaths by Small Pox in the United States... have always exceeded the number of persons imported from other countries.⁷⁵ Death rates during epidemics reached as high as five

per thousand inhabitants in major cities. The Board of Health of Philadelphia reported 535 deaths from smallpox between 1807 and 1811, or over 100 deaths per year.⁷⁶ The population of Philadelphia in 1810 was only 53,722, so the smallpox mortality rate was about two per thousand. In Baltimore, Dr. Smith reports that during the epidemic of 1812, one thousand

⁶⁹ See DUFFY, *supra* note 18, at 54.

⁷⁰ See SMILLIE, *supra* note 10, at 27-28. Out of Boston's population of 15,684, smallpox claimed 569. The death toll was even more frightening considering that 50% of the population had increased immunity from variolation. For a discussion of variolation, *see infra* text accompanying notes 97-103.

See FENNER ET AL., *supra* note 17, at 239-240, 257.

⁷² *See infra* text accompanying notes 97-106 for distinction between variolation and vaccination.

⁷³ *See* DUFFY, *supra* note 18, at 247.

⁷⁴ *See* H. REP. No. 17-48 (1822).

⁷⁵ SMITH, PROSPECTUS, *supra* note 54, at 30. Immigration into the United States in 1820 totaled 8385 persons. The population of the country at the time was 9,618,000. If the smallpox mortality averaged at least 0.9 per thousand, Smith's observation would be accurate. *See* HISTORICAL STATISTICS, *supra* note 51, at 106 (series C89), 8 (series A7).

⁷⁶ *See* VACCINE SOCIETY OF PHILADELPHIA, CONSTITUTION OF THE VACCINE SOCIETY OF

PHILADELPHIA 4 (1813) *microformed on* Early American Imprints, Second Series, Fiche 29504 (Readex).

See also, SMITH, PROSPECTUS, *supra* note 54, at 15.

⁷⁷ *See* THIRD CENSUS OF THE UNITED STATES 33 (1811). The county of Philadelphia had an additional

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people were afflicted with smallpox and 175 people died.⁷⁸ Given Baltimore's population of 35,583, the smallpox mortality rate was five per thousand. While these mortality rates are an order of magnitude less than in the 18th century thanks to variolation and vaccination, smallpox remained a vicious killer. The best smallpox mortality data for the ante-bellum United States is available for New York City. During the first eleven months of the 1815-1816 epidemic, 293 people died in New York City.⁸⁰ Seventeen deaths were reported the second week of December 1815 alone.⁸¹ Given the city's population of perhaps 100,000,⁸² that translates to a death toll of almost three per thousand. To put that figure in perspective, an pestilence with an equivalent mortality rate in modern-day New York City would kill perhaps 30,000 people in a year. In the epidemic of 1824 the death toll rose to 400 persons.⁸³ Even in the absence of major epidemics, annual death rates from smallpox in New York rarely dipped below 0.5 deaths per 1000 inhabitants. Smallpox accounted for approximately two percent of all fatalities in ante-bellum New York.⁸⁴

Though the best data is available for cities like Philadelphia, New York, and Baltimore, smallpox was a universal problem. During the 1808-1811 epidemic in Philadelphia, a committee of the Pennsylvania Senate reported that No part of the state can be said to be

population of 57,488. *See id.* at 34.

⁷⁸ *See* JAMES SMITH, TWO LETTERS RELATIVE TO THE VACCINE INSTITUTION 22(1818) *microformed on*

Early American Imprints, Second Series, Fiche 45729 (Readex)

See THIRD CENSUS OF THE UNITED STATES 53 (1811). The Eastern and Western precincts of

Baltimore added 10,972 inhabitants, and the county of Baltimore had an additional population of 29,255.

See id. at 53.

⁸⁰ *See* MEDICAL SOCIETY OF THE COUNTY OF NEW YORK, *supra* note 66, at 9.

⁸¹ *See* DUFFY, *supra* note 18, at 248.

⁸² According to the THIRD CENSUS OF THE UNITED STATES 28 (1811), the population of New York City in 1810 was 96,373.

⁸³ *See* DUFFY, *supra* note 18, at 248.

⁸⁴ *See id.* at 249, 583-84. Duffy provides average annual death rates and absolute number of deaths from various diseases for five year periods from 1804-1865.

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clear of the Small Pox; we hear of its annual devastation in almost every county.⁸⁵ Smith noted that smallpox was soon carried from port cities like New York and Philadelphia onto the main roads and the publick houses on the high roads leading to the westward.⁸⁶ The Smallpox would eventually spread into many other towns and seaports within the United States: from these again it was . . . carried into the interior of the country.⁸⁷ According to Dr. Smith, in 1817 smallpox was an alarming epidemic across a wide swath of the country—in Pennsylvania, Ohio, Indiana, Kentucky, and Tennessee.⁸⁸

At mid-century, smallpox was still rampant. Major epidemics hit New York City in the 1840's and 1850's with the death toll rising to 681 in 1853, or about 1.3 deaths per thousand inhabitants.⁸⁹ A contemporary writer chronicles how this most preventable of diseases spreads uncontrolled throughout our city.⁹⁰ There were epidemics across the Eastern seaboard in late 19th century associated with waves of poor European immigrants. ~' During the 1845-46 epidemic in Baltimore, the death rates from smallpox reached 0.79 per 1000.⁹² Smallpox epidemics were also common in frontier areas distant from the Eastern seaboard.⁹³ San Francisco, for example, suffered from a series of four frightening epidemics in the two decades after the Civil War.⁹⁴ As late as 1921, the national *incidence* of smallpox reported was

⁸⁵ 20J. OF SENATE OF PENN. 1809-18 10, *supra* note 65, at 319.

⁸⁶ SMITH, PROSPECTUS, *supra* note 54, at 22.

⁸⁷ *Id.* at 21.

⁸⁸ *Id.* at 22-23.

⁸⁹ See DUFFY, *supra* note 18, at 448.

~ STEPHEN SMITH, NEW YORK THE UNCLEAN (1865) *excerpted in* MEDICAL AMERICA IN THE 19TH CENTURY 263, 271 (ed. Gert H. Bueger 1972).

~' See FENNER ET AL., *supra* note 17, at 240.

⁹² See GARY L. BROWNE, BALTIMORE IN THE NATION, 1789-1861, at 200 (1980).

~ See 13 CONG. REC. 862 (1882); SMILLIE, *supra* note 10, at 125.

~ See Craddock, *supra* note 64. Curiously, Craddock's account of San Francisco's response to the epidemics makes no mention of vaccination campaigns by city authorities like those which were common in Eastern cities. It is unclear if this absence should be attributed to a lack of vaccine in San Francisco or an oversight on Craddock's part.

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almost 1 per 1000 people, though death rates had greatly declined.⁹⁵ It was not until universal vaccination became widespread in the 1930's that smallpox incidence rates were brought under control.⁹⁷

Tens of thousands of Americans lost their lives to smallpox in the 19th century. And yet, after vaccination was introduced into the United States in 1801 every smallpox death was wholly preventable. Had early American governments implemented comprehensive vaccination programs, the United States could have conquered smallpox a century earlier.

B. The Discovery of Vaccination, the Greatest Single Triumph of Man

The importance of smallpox as an object of historical analysis is less due to the deaths it caused, than to the discovery of vaccination. For the first time in human history, in 1798 man learned how to eradicate a virulent disease. Early in the 18th century, Europeans finally learned how Asians and Africans variolated for smallpox.⁹⁷ The practice of variolation, called inoculation at the time, was soon introduced into the United States by Cotton Mather in the early 18th century.⁹⁸ Variolation consisted of introducing a small amount of the live smallpox virus into the arm of a healthy individual. The attenuated virus produced a mild case of smallpox in the subject and granted increased immunity against the disease. Variolation had two major drawbacks, however. Very rarely the smallpox infection

~ See HISTORICAL STATISTICS, *supra* note 51, at 77 (series B304); FENNER ET AL., *supra* note 17, at 328-32.

A milder strain of smallpox became dominant in the United States at the turn of the century, and mortality rates consequently declined sharply even though incidence rates remained high. *See id.* It is

estimated that actual incidence at the turn of the century was at least five times as great as the reported rate; as the disease became more mild, incidents of the disease often went unreported. *See id.*, at 329.

~ HISTORICAL STATISTICS, *supra* note 51, at 77 (series B304); FENNER ET AL., *supra* note 17, at 330-32. In 1922 the Supreme Court upheld mandatory vaccination requirements for school attendance. *See* *Zucht v. King*, 260 U.S. 174, 43 S.Ct. 24 (1922).

For a history of variolation and its introduction to Europe, see FENNER ET AL., *supra* note 17, at 252-

58.

⁹⁸ For a detailed retelling of the storied exploits of Mather, see SMILLIE, *supra* note 10, at 24-28.

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induced by variolation would actually kill the subject.⁹⁹ More problematically, an inoculated individual was contagious, i.e., she could pass the smallpox virus to others and start an epidemic herself.¹⁰⁰ Variolation with live smallpox was such a problematic prophylactic treatment that its practice was often strictly regulated. For example, Virginia enacted statutes in the late 18th century which required the approval of a town's magistrates or one's neighbors before someone could be inoculated.¹⁰¹ The threat posed by variolation was taken very seriously; colonial Virginia imposed an extraordinary 1000L penalty for an unapproved variolation.¹⁰² Once the practice of vaccination was introduced, most states banned variolation.¹⁰³

Given the great fear which smallpox caused and the problematic nature of variolation, the discovery in 1798 of the cow-pox vaccine aroused enormous excitement among doctors and municipal officials.¹⁰⁴ In 1798, a now legendary British physician, Dr. Edward Jenner, persuasively demonstrated that inoculating humans with a bovine disease related to smallpox, cow-pox or kine-pox, resulted in immunity to smallpox without the serious drawbacks of variolation.¹⁰⁵ Based on the medical term for the cow-pox virus,

Fatality rates from variolation are estimated at 0.5-2% compared to 20-30% for full-blown smallpox. See FENNER ET AL., *supra* note 17, at 246.

⁹⁹ See FENNER ET AL., *supra* note 17, at 246; 20J. OF SENATE OF PENN. 1809-1810, *supra* note 65, at 201;

SMITH, TWO LETTERS, *supra* note 78, at 13; DUFFY, *supra* note 18, at 55.

¹⁰⁰ See ROBERT H. HALSEY, HOW THE PRESIDENT, THOMAS JEFFERSON AND DOCTOR BENJAMIN

WATERHOUSE ESTABLISHED VACCINATION AS A PUBLIC HEALTH PROCEDURE 33-34 (1936) (Libr. of

NY Acad. of Med., Hist. of Med. Series No. 5).

¹⁰¹ See *id.*

¹⁰² See, e.g., DUFFY, *supra* note 18, at 246-49, 448.

¹⁰³ See, e.g., MASS. MEDICAL SOCIETY, REPORT ON VACCINATION 90 (1808) (on file with Harvard Medical School's Countway Rare Book Library) (noting the high interest which this discovery [vaccination] excited in this country... engage[ing] the attention of almost every individual. ... in the medical profession).

¹⁰⁴ See SMILLIE, *supra* note 10, at 29-31; FENNER ET AL., *supra* note 17, at 258-261. There has been debate over whether Jenner really was the first to discover the effectiveness of the cow-pox vaccine. See FENNER ET AL., *supra* note 17, at 258, 264.

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vaccinia, the new treatment was dubbed vaccination.¹⁰⁶ The cow-pox virus was closely enough related to the smallpox virus that inoculation with it granted immunity to smallpox. But cow-pox did not cause a serious illness in humans, and, more importantly, the cow-pox virus was not contagious in humans. Unlike variolation, vaccination could not initiate deadly epidemics.

At the time the cow-pox virus was the only known safe and effective prophylactic against any epidemic disease.¹⁰⁷ The British government awarded Jenner the princely sum of \$100,000 as a reward for his discovery.¹⁰⁸ With inoculations for so many diseases widely available today, it is difficult to appreciate the importance of the discovery of vaccination. The smallpox vaccine has been called, with perhaps only slight exaggeration, the greatest single triumph of man in his march toward civilization. ~ The results of vaccination could be awesome. As a result of wholeheartedly implementing a program of universal vaccination, France's life expectancy at birth increased dramatically from 23 to 38 for men and 27 to 41 for women between 1795 and 1817~1831.¹¹⁰

News of the great discovery spread rapidly throughout the world and reached the States within a year. ~ In 1800, Dr. Benjamin Waterhouse of Harvard Medical School, America's Jenner, demonstrated its effectiveness to Americans.² A tremendous amount of

¹⁰⁶ See STEDMAN'S MEDICAL DICTIONARY 1899 (1995). *Vaccus* is Latin for cow.

¹⁰⁷ Pasteur eventually applied the term to all kinds of inoculations. See FENNER ET AL., *supra* note 17, at 258.

¹⁰⁸ See SMITH, PROSPECTUS, *supra* note 54, at 11.

¹⁰⁹ SMILLIE, *supra* note 10, at 31.

¹¹⁰ See FENNER ET AL., *supra* note 17, at 262. Fenner attributes the increase to vaccination since vaccination was the only public health measure of any importance at the time. ~ See *id.* at 261-63.

¹¹² See SMILLIE, *supra* note 10, at 30-31. Waterhouse experimented with the vaccine on his own family and a group of orphans by first giving them the vaccine and then testing if a smallpox variolation would take.

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attention to vaccination immediately followed all across the country.³ By all accounts, the second physician in the United States to begin regular vaccinations was Dr. James Smith in Baltimore, the central figure in the history of the Vaccine Act.⁴ James was a respected physician⁵ and was the attending physician at the Baltimore Alms House.⁶ In 1801, Dr. Smith received cow-pox virus from an American merchant returning from Europe. Dr. Smith immediately began vaccinating locals and propagating the vaccine.⁷

The advantages of vaccination over variolation were obvious, and most physicians immediately acknowledged the profound effectiveness of vaccination. An unprecedented number of books and tracts regarding vaccination were published in the opening decade of the 19th century.¹⁹ American policy makers knew that many European countries had dramatically reduced smallpox deaths within a decade of implementing ambitious vaccination programs.²⁰ It was often asserted that the discovery of the cow-pox vaccine would soon lead to the total eradication of smallpox.²¹ As William Pendergast notes in his history of biologic drugs

~ For a discussion of the encouragement given to vaccination in Virginia, Washington DC, and Pennsylvania by Thomas Jefferson, see HALSEY, *supra* note 101.

~ See HALSEY, *supra* note 101, at 28. This should not be that surprising; Baltimore had a well deserved reputation for innovation in public health and medicine. See BROWNE, *supra* note 92, at 104.

~ When smallpox threatened Baltimore, Smith was appointed by Mayor to the Committee of Physicians. See *Meeting of Physicians at the Mayor's Office*, 2 VACCINE INQUIRER 77 (1822), *supra* note 125.

³See JAMES SMITH, THE ADDITIONAL NUMBER OF THE LETTERS OF HUMANITAS 43 (1801) *microformed on* Early American Imprints, Second Series, Fiche 1332 (Readex).

~ See SMITH, PROSPECTUS, *supra* note 54, at 11; Affidavit of James Smith (May 15, 1826) in H.R. REP NO. 19-95, at 5 (1827).

~ See, e.g., MASS. MEDICAL SOCIETY, *supra* note 104, at 99.

~ A search of Harvard University's library catalog reveals an incredible 197 texts regarding vaccination

published between 1800 and 1809 in Harvard's collection. Search of Harvard On-Line Library

Information System (April 20, 1998) (search for KW vaccine or vaccination or kine//yr= 180?).

¹²⁰ See FENNER ET AL., *supra* note 17, at 271-73.

¹²¹ See, e.g., BENJAMIN WATERHOUSE, A PROSPECT OF EXTERMINATING THE SMALL Pox (1802) *microformed on* Early American Imprints, Second Series, Fiche 3499 (Readex); GUTON G. JOHNSON, ANTE-BELLUM NORTH CAROLINA 735 (1937); DUFFY, *supra* note 18, at 447.

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The significance [of the discovery of smallpox vaccine] must not be discounted, especially when we recall that most other drugs of the time were crude vegetable preparations directed more at symptoms than at specific disease conditions. That a widespread, lethal, epidemic disease could be prevented... must have struck those responsible for the welfare of whole populations as a thunderbolt.¹²²

Vaccination, however, was not a self-implementing medical advance. Many hurdles had to be

overcome before its value was fully realized. Unfortunately, American governments failed to adequately address these hurdles for decades.

C Impediments to Implementing Vaccination

Despite the discovery of smallpox vaccination at the dawn of the century, it was not until the end of the century that smallpox mortality in the United States was brought under control. ¹²³ There were a number of basic impediments to the effective implementation of vaccination: public opposition, the expense of vaccination, and the lack of a reliable supply of cow-pox vaccine. Until these problems were overcome, thousands would continue to die of smallpox. While vaccination rates in some major cities were quite high,¹²⁴ vaccination spread very slowly through the rest of the country. In 1822, vaccination rates in coastal North Carolina were estimated at around 1%.iOs

1. Public Skepticism

Though the consensus among physicians and policy makers recognized the great value of vaccination, there was significant ambivalence and even hostility towards vaccination

¹²² Pendergast, *supra* note 24, at 305.

¹²³ See *supra* text accompanying notes 89-96.

¹²⁴ James Smith eventually had to send an agent into Pennsylvania to find healthy, unvaccinated individuals after depleting the supply in Baltimore and the surrounding counties of Maryland. See *infra*

text accompanying note 165.

¹²⁵ See Open Letter from Dr. Ward (Feb. 7, 1822) reprinted in 3 VACCINE INQUIRER 136, 140

(1822) microfilmed on American Periodical Series, 1800-1850, Reel 246 (University Microfilms).

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among the populace.¹²⁶ As late as 1822, there was a proposal in Congress to have a select committee consider whether there is any reasonable doubt of the efficacy of vaccination in response to the skepticism of the public.¹²⁷ Indeed Congressmen worried that investigation into the facts of Tarboro Tragedy itself would only lend credence to people . . . who went about preaching [against vaccination] and that old fashioned small pox [i.e., variolation] was the only thing.¹²⁸

Part of the opposition to vaccination resulted from a well-founded skepticism of the largely ineffective or even dangerous practices which passed for medicine in ante-bellum America.¹²⁹ The dangers and distrust associated with the practice of variolation were also naturally imputed to the closely related practice of vaccination. Some clergy felt that vaccination interfer[ed] with the will of God by preventing smallpox from taking its natural course and smiting the unworthy.¹³⁰ Moreover, there was understandable widespread opposition to injecting fluids derived from diseased cows into healthy humans.¹³¹ It seemed unnatural, sacrilegious, and down-right dangerous. IIP]opular cartoons depicted people growing horns or tails after being vaccinated.¹³² This ambivalence combined with a general sense of security and carelessness in the years between epidemics, lead people to ignore vaccination until a smallpox epidemic actually struck.⁷

¹²⁶ See DUFFY, *supra* note 18, at 447-48.

¹²⁷ See 38 ANNALS OF CONG. 853-54 (1822).

¹²⁸ 39 ANNALS OF CONG. 1638 (1822)

¹²⁹ See JOHNSON, *supra* note 121, at 749-63 for a detailed description of medicine in the ante-bellum South.

¹³⁰ FENNER ET AL., *supra* note 17, at 267.

¹³¹ *Id.* at 267.

¹³² *Id.*

⁷ See DUFFY, *supra* note 18, at 247-48; SMITH, PROSPECTUS, *supra* note 54, at 27-28; MEDICAL SOCIETY OF THE COUNTY OF NEW YORK, *supra* note 66, at 24-25.

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Finally, commercial interests often blocked vaccination efforts. When cases of smallpox first arose in a city, health officials attempted to publicize the imminent epidemic to encourage the otherwise neglected practice of vaccination. Merchants used their growing political power to oppose announcements of epidemics.³⁴ Merchants feared business would be hurt by the resulting panic and mass exodus from the city. Governments thus had the opportunity to save lives by entering the debate over vaccination. By endorsing the safety and efficacy of vaccination and encouraging municipalities to ignore pressure from merchants, legislatures could help overcome public antipathy. By and large, legislatures were happy to oblige as long as they did not have to spend state funds.

2. The High Cost of Vaccination

Even for those willing to undergo vaccination, the cost of vaccination was often

prohibitive for the poor. In 1816, physicians in New York were charging \$5-S 10 for vaccinations plus an additional \$5 charge for a house visit during an epidemic.³⁵ Costs were similar in other parts of the country.³⁶ Adjusted for inflation, vaccination cost households \$50-s 100 per family member.³⁷ Without any form of health insurance, vaccination was simply

See SMITH, TWO LETTERS, *supra* note 78, at 21. Smith claims that in 1821, even the consulting physician to the Baltimore Board of Health concealed a smallpox outbreak to prevent alarm, or to serve, perhaps, the mercantile interests.... Letter from James Smith to Senator Lloyd (Apr. 25, 1822) *appended to* H. Rep. No. 17-48 (1822). The political power of merchants in major cities should not be underestimated. For example, fully one-third of city council members in Baltimore between 1797 and 1815 were merchants. See BROWNE, *supra* note 92, at 44-45.

³⁵ See LIST OF MEDICAL AND SURGICAL CHARGES ESTABLISHED BY THE ASSOCIATED PHYSICIANS AND

SURGEONS OF THE CITY OF NEW-YORK (1816) *microformed on* Early American Imprints, Second Series,

Fiche 38213 (Readex) [hereinafter LIST OF MEDICAL AND SURGICAL CHARGES].

³⁶ For example, in 1800 a physician in North Carolina charged \$8 for smallpox *varioliations*. See JOHNSON, *supra* note 121, 734-735 (1937). Presumably he charged a similar price in later years for vaccinations, which involved an identical procedure.

~ The amounts are in 1996 dollars. The inflation deflator is taken from Robert Sahr, *Consumer Price Index Conversion Factors to Convert to 1996 Dollars* (last modified Apr. 8, 1996) <http://www.orst.edu/Dept/poli_sci/sahr/cpi96.html> [hereinafter *CPI Conversion Factors 1996*] which are in turn based on HISTORICAL STATISTICS, *supra* note 51, at 210-11 (Series E135) and the Bureau of Labor Statistics' Consumer Price Index. Estimating the present value of prices from the early 19th century is very problematic. See *id.*, at 190-92. The amounts given here should be taken as rough

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unaffordable for many families. This was simply too much for many families to spend on a prevention measure that they doubted in any case. It should not be surprising that vaccination was observed only when the threat of smallpox was imminent.

There is some evidence to suggest that the high cost of vaccination was due to the monopoly physicians enjoyed on performing vaccinations. The Town of Milton charged only 25 cents for vaccinations when it established a town sponsored clinic in 1809.¹³⁸ It appears the Town simply obtained the services of physicians gratis, but it is possible that the Town also directly subsidized the costs of vaccinations.¹³⁹ In 1812, the New York Kine-Pox Dispensary vaccinated 1658 indigents on a total budget of \$1,275.56, or about 75 cents per

There appeared, thus, to be much room for government subsidies to make vaccination more affordable for middle-class Americans. Legislatures in the early 19th century almost uniformly refused, however, to subsidize vaccination.

3. Maintaining a Reliable Vaccine Supply and the Need for Vaccine Institutions The most significant obstacle to effective vaccination was the difficulty of

obtaining pure, uncontaminated vaccine when an epidemic threatened. Vaccine was difficult to produce in mass quantities, could only be stored for a short time, and was easily contaminated. For vaccination to be effectively implemented it was necessary that charitable or government supported vaccine institutions be established to maintain a reliable supply of vaccine. These institutions could both propagate the vaccine supply in the years between epidemics and ensure that the vaccine supply was not inert or contaminated with other viruses. The absence

estimates.

¹³⁸ See *infra* text accompanying notes 187-191.

See *infra* text accompanying note 190.

~ See DUFFY, *supra* note 18, at 247. Similar costs were reported for vaccination efforts in 1816.

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of a continuous source of genuine, uncontaminated vaccine was a major impediment to vaccination in the 19th century.

Many commentators in the early 19th century bemoaned the difficulty of procuring the pure vaccine and perpetuating it has ever been the greatest impediment to the practice of vaccination.⁴¹ Despite charitable vaccine institutions in major urban areas,⁴² it appears that vaccine was not readily available throughout country.⁴³ During the War of 1812, the Army urgently requested the recently appointed National Vaccine Agent, James Smith, to supply vaccine to the Northern, Northwestern, and Western Armies.⁴⁴ After the war had ended, the Army continued to ask Dr. Smith for supplies of vaccine. In one 1816 letter, the Surgeon General of the Army requested vaccine for twenty-three forts and regiments from Boston to New Orleans.⁴⁵ After the Army adopted compulsory vaccination in 1818, ‘~’ its need for a steady supply of vaccine only increased. After Congress refused to compensate James Smith for the vaccine he supplied the military, the Army quickly paid the amount Smith demanded to ensure a continued supply of vaccine.⁴⁷ The difficulty of obtaining reliable

‘SYLVANUS FANSHER, MEMORIAL, SEN. DOC. NO. 25-385, at 2 (1838). See also, 20J. OF SENATE OF PENN. 1809-1810, *supra* note 65, at 316.

142 See *infra* text accompanying notes 176, 233-236.

Critics of Smith’s efforts often asserted that there was no shortage of genuine vaccine. See, e.g., SMITH, TWO LETTERS, *supra* note 78, at 32 (citing critics); MEDICAL SOCIETY OF THE COUNTY OF NEW YORK, *supra* note 66, at 16 (denying Smith’s assertions that the want of ‘genuine vaccine matter is the only serious difficulty’ to promoting vaccination). See also MASS. MEDICAL SOCIETY, *supra* note 104, which makes no mention of the problem of obtaining reliable vaccine. The Massachusetts Medical Society was instead concerned with public doubts of the vaccine’s efficacy. There probably was no shortages in Boston and New York and the other major cities in which these medical societies were located.

‘See Letter from Francis Le Barron, Surgeon U.S. Army, to Dr. James Smith (Apr. 12, 1813) *copy appended to* James Smith, Report of the Vaccine Institution to Congress (1821) (on file with the National Archives: Senate Documents, Box 16A-K5, ‘Document About Vaccine Institution).

‘See Letter from Francis Le Barron, Surgeon U.S. Army, to Dr. James Smith (Nov. 5, 1816) *copy appended to* Smith, Report, *supra* note 144.

‘~’ See Letter from Jos. Lovell, Surgeon General, U.S. Army, to James Barbours, Secretary of War (Feb. II, 1826), HR. DOC. No. 19-90 (1826).

~ See *infra* Part V.C.

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supplies of vaccine continued throughout the 19th century.¹⁴⁸ The inattention given vaccination until an epidemic struck only exacerbated the problem. Years would pass with little to no local demand for the vaccine and then an epidemic would suddenly trigger a tremendous demand. Smallpox vaccine was often so difficult to obtain during epidemics that the dangerous practice of variolation with the live smallpox virus continued well into the 19th century.¹⁴⁹ The practice of variolation, of course, only increased the danger of an epidemic.¹⁵⁰

Maintaining a supply of pure, uncontaminated vaccine was no easy matter. No method of artificially producing the vaccine was known to 19th century physicians. The original cow-pox virus is a rare disease in cows¹⁵¹ which was long thought to be not indigenous to the United States.¹⁵² Luckily, the cow-pox virus is hardy enough that it can be dried and preserved for a short time on silver or ivory quills or on glass slides.¹⁵³ Samples of vaccine could be imported from England by ship¹⁵⁴ and be distributed efficiently around the country

through the mail.¹⁵⁵ However, the dried cow-pox virus can only be preserved for perhaps 30 to

¹⁴⁸ See *infra* Part VII.

¹⁴⁹ See DUFFY, *supra* note 18, at 248; JAMES SMITH, MEMORIAL 6 (1816) *microformed on Early American Imprints, Second Series, Fiche 38948 (Readex)* [hereinafter SMITH, 1816 MEMORIAL].

¹⁵⁰ See *supra* text accompanying notes 100-103.

¹⁵¹ See FENNER ET AL., *supra* note 17, at 265.

¹⁵² See 20J. OF SENATE OF PENN. 1809.1810, *supra* note 65, at 315; MEMORIAL FROM BOARD OF MANAGERS OF PROPOSED NATIONAL VACCINE INSTITUTION, H. DOC. NO. 16-29 at 2(1820) [hereinafter BOARD OF MANAGERS]. (Passages of this latter document are copied directly from SMITH, PROSPECTUS, *supra* note 54, so James Smith is the document's likely author.) But See FANSHER, *supra* note 141, at 7 (not generally known that cow-pox is sometimes happily found among the cows in Connecticut and neighboring states).

¹⁵³ See FENNER ET AL., *supra* note 17, at 263.

¹⁵⁴ See, e.g., SMILLIE, *supra* note 10, at 30-31 (describing Waterhouse receiving original vaccine virus from Jenner in England); SMITH, PROSPECTUS, *supra* note 54, at 11 (describing receiving original vaccine from London).

¹⁵⁵ The postal system appears to have been reasonably efficient. For example, letters between James Smith

in Baltimore and Francis Le Barron in Philadelphia appear to have been regularly delivered within two days even during the War of 1812. See letters appended to SMITH, REPORT, *supra* note 144.

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90 days,¹⁵⁷ after which the virus was rendered inert, or spurious. The live virus needed to be propagated in the United States to maintain a long-term indigenous supply.

The only known method of propagating the cow-pox virus over long periods was through a succession of human subjects.¹⁵⁷ (For some unexplained reason, the obvious trick of propagating the virus by artificially infecting a succession of cows did not begin in the United States until after 1870.¹⁵⁸) Physicians quickly learned that live cow-pox virus could be harvested from the infected pustule of a vaccinated person eight days after vaccination.¹⁵⁹ This harvested virus could be dried for future use or immediately used to vaccinate others. This method of arm-to-arm propagation was so important that numerous medical manuals were printed which described the procedure in great detail.¹⁶⁰ Through a constant stream of subjects, the virus could be propagated indefinitely over the years. Every eight days the virus was harvested from someone vaccinated the previous week and inserted into a new unvaccinated patient. Dr. Smith propagated a sample of virus received from England for more than 20 years through such arm-to-arm transmission.¹⁶¹ Other physicians also reported maintaining a single sample of vaccine for decades.¹⁶² Of course, in the absence of an epidemic it was no easy matter to maintain a steady supply of healthy, unvaccinated subjects, year after year, particularly in cities like Baltimore with a long history of vaccination.¹⁶³ Convincing

¹⁵⁷ See John Cromwell, et. al., Physician's Certificate in SMITH, PROSPECTUS, *supra* note 54, at 9. ¹⁵⁸ See SMILLIE, *supra* note 10, at 125.

¹⁵⁹ See *id.*; FENNER ET AL., *supra* note 17, at 265-67. However, as early as 1801, Waterhouse experimented with inoculating cows with cow-pox taken from vaccinated humans and then collecting vaccine from the cows. See HALSEY, *supra* note 101, at 17.

¹⁶⁰ See SMITH, TWO LETTERS, *supra* note 78, at 31.

¹⁶¹ One of the most prominent was VALENTINE SEAMAN, A DISCOURSE UPON VACCINATION (1816) *microformed on* Early American Imprints, Second Series, Fiche 38906 (Readex). See DUFFY, *supra* note 18, at 245-46 for a description of Seaman's role in promoting vaccination in New York City.

¹⁶² See Affidavit of James Smith (May 15, 1826) in H.R. REP No. 19-95, at 5 (1827). ¹⁶³ See, e.g., FANSHER, *supra* note 141, at 2.

¹⁶⁴ See SMITH, TWO LETTERS, *supra* note 78, at 15.

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them in the absence of a threatening epidemic to submit to vaccination and return eight days later to pass on the virus was even more difficult. Dr. Smith found it a very troublesome business to prevail on families to submit to vaccination in the absence of an epidemic.⁴ Smith eventually resorted to sending a trained agent into Pennsylvania where smallpox was more widespread and vaccination less common to vaccinate people and propagate the virus.¹⁶⁵ Needless to say, maintaining a steady supply of vaccine for decades was a major undertaking.

Though it was the only known method of propagating the virus, arm-to-arm transmission was a risky business. Indiscriminate arm-to-arm transmission often resulted in the transmission of other diseases the patients were carrying.⁶ The accidental transmission of syphilis was particularly common. Physicians needed to ensure that they harvested vaccine from patients free of other infectious diseases, lest people find another reason to fear vaccination,⁷ yet physicians were surprisingly careless about harvesting vaccine from individuals infected with other diseases. Even more problematically, laypersons and even physicians would mistake related infections for the cow-pox virus. They would use arm-to-arm transmission to pass dangerous infections to others in the mistaken belief that they were vaccinating for smallpox.⁸ Both physicians and laypersons were also wont to perform arm-to-arm transmission after the virus in the pustule had expired and been rendered inert.⁹ Without medical follow-up, the patient mistakenly believed she was protected from smallpox. These problems with arm-to-arm transmission counseled for a central source of vaccine which was known to be uncontaminated and effective. Even during epidemics, when there was no

Id. at 31.

¹⁶⁵ *See id.* at 32.

⁶ *See* SMILLIE, *supra* note 10, at 125.

¹⁶⁷ *See id.*

¹⁶⁸ *See* SMITH, TWO LETTERS, *supra* note 78, at 4; BOARD OF MANAGERS, *supra* note 152, at 4-5. *See* H. Rep. No. 17-48 (1822); *Spurious Vaccination*, 1 VACCINE INQUIRER 38(1822), *supra* note 125.

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shortage of willing subjects, a trustworthy original source for vaccine was still needed. These problems also indicated the care with which vaccine needed to be propagated over the years.

The obvious solution was to establish vaccine institutions dedicated to preserving a supply of vaccine through regular arm-to-arm transmissions between healthy individuals. Unfortunately, these vaccine factories depended on either charitable or government support; they could not be profitable businesses. There was a simple structural impediment to the production of vaccine by the private sector. Without compulsory vaccination, the demand for the vaccine was highly sporadic. Years of very low demand were followed by short periods of very high demand. Large investments were necessary to maintain the vaccine supply during these long periods of low-demand, but these investments could not be recovered during a period of high demand. During an epidemic local entrepreneurs could obtain a single sample of vaccine from any existing manufacturer and easily produce an infinite supply of vaccine through arm-to-arm transmission.¹⁷⁰ The price of vaccine would be forced to the very low cost of production, and the manufacturer would be unable to recoup its up-front investment.

Private enterprise could profitably produce vaccine if producers were granted monopolies; however, the tenor of the time prevented a grant of a monopoly over such an important medical breakthrough. Very early Benjamin Waterhouse emphatically rejected the

¹⁷⁰ The entrepreneur's supply might be contaminated with syphilis or be otherwise untrustworthy. However, without clear branding it was difficult for consumers to respond to the potential quality differences. Moreover, skilled physicians could certainly establish quality-controlled supplies during an epidemic; they might even feel ethically obligated to maintain such supplies.

~~~~ In this sense, vaccine production had an economic structure akin to the production of intellectual property. The economic structure of vaccine production explains Smith's demand that subscribers to his Institution not share the vaccine they receive from him with other physicians and his proposal to tax vaccinations. See SMITH, PROSPECTUS, *supra* note 54, at 5-6 (limiting subscribers from distributing vaccine); JAMES SMITH, THE NATIONAL VACCINE INSTITUTION 1 (1822) (on file with Countway Rare Books: Pamphlets on Small-pox, No. 6) (same); *infra* text accompanying notes 329-33 1 (tax proposal).

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idea of production monopolies,<sup>172</sup> and the very suggestion that the Vaccine Act granted Dr. Smith a monopoly aroused vocal criticism of the 1813 Act.<sup>173</sup> Besides, private enterprises would face perverse incentives to maximize business by ensuring that smallpox remained epidemic. The extermination of smallpox would obviously not be in the best interest of a profit-maximizing vaccine producer. Even though universal vaccination would be favored by a private producer, in a nation which neglected vaccination until an epidemic was imminent,<sup>174</sup> a profit-maximizing producer would want regular epidemics to encourage the sale of vaccine. This effect was recognized by people at the time. When Dr. Smith accidentally mailed live smallpox instead of cow-pox to a physician in North Carolina causing a minor epidemic, there were accusations that the physicians had purposely instigated an epidemic to increase their sales.<sup>175</sup>

In addition to publicly endorsing vaccination and subsidizing the vaccination of the poor, American governments were presented with the opportunity to establish vaccine institutions to maintain a reliable, genuine supply of vaccine. Reliable sources of vaccine were a *sine qua non* of successfully implementing vaccination, yet state governments and the federal government refused to do anything which would draw upon public coffers. While governments were happy to endorse vaccination, they would not spend money to subsidize the distribution or production of vaccine. The reaction of state and local governments is discussed in Part D below; the remainder of the Paper analyzes the efforts of the national government.

<sup>172</sup> See, HALSEY, *supra* note 101, at 57.

<sup>173</sup> See *infra* Part IV.D.

<sup>174</sup> See *supra* Part II.C.1-2.

<sup>175</sup> See *infra* text accompanying notes 409, 436.

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### III. State and Local Governments: The Reluctance to Allocate Funds

In the largest cities, such as New York, Philadelphia, and Baltimore, charitable Vaccine Institutions were established to provide for vaccination of the poor and maintain a local supply of vaccine.<sup>77</sup> In other areas, individual physicians and private citizens attempted to promote vaccination on their own.<sup>77</sup> Antebellum state and local governments, however, failed to respond to the opportunity provided by the discovery of vaccine. The reaction of state governments throws doubt on Novak's *salus populi* thesis and on federalism explanations for the inactivity of the central ~

Admittedly, American political institutions were not developed enough to pursue the most effective and obvious solution, compulsory vaccination.<sup>79</sup> Americans were aware

that in the first decade of the 19th century a number of European countries successfully implemented compulsory vaccination programs to dramatic effect, but even politicians inclined to support vaccination recognized that compulsory vaccination was not an option in ante-bellum America.<sup>80</sup> American norms of liberty and limited government would not allow

~ See DUFFY, *supra* note 18, at 245-49 (New York); VACCINE SOCIETY OF PHILADELPHIA, *supra* note 76; SMITH, PROSPECTUS, *supra* note 54, at 12-13 (Baltimore). These organizations usually consisted of informal, unincorporated groups of physicians backed by wealthy benefactors. New York Kine-Pock Institution, for example, was formed at a meeting of physicians at the Tontine Coffee-House and operated out of a lower-eastside apartment before being absorbed by the larger New York Public Dispensary. See CONSTITUTION OF NEW YORK VACCINE INSTITUTE (1802), *microformed on* Early American Imprints, Second Series, Fiche 2789 (Readex); DUFFY, *supra* note 18, at 245.

~ See, e.g., FANSHER, *supra* note 141 (Connecticut physician promoting vaccination since 1808);

HALSEY, *supra* note 101 (efforts of Thomas Jefferson to promote vaccination in Virginia and Washington DC).

~<sup>78</sup> See *supra* note 39 for description of the *salus populi* thesis. See *supra* note 40 for description of federalism explanations.

It is possible that some localities may have adopted something close to mandatory vaccination programs during outbreaks. See, e.g., H. REP. No. 20-215, at 2-3 (1828) (after outbreak of smallpox, a very general vaccination has been resorted to in Washington, D.C.); Letter from Committee of Physicians to Mayor of Baltimore (1821) in 2 VACCINE INQUIRER 80-81 (1822), *supra* note 125 (instructing district officials to seek out all unvaccinated poor and report the same for vaccination).

See, e.g., H. Rep. No. 17-48 (1822) (after listing dramatic affects of compulsory vaccination in Europe, no recommendation of such a program in the United States); 39 ANNALS OF CONG. 1637 (after discussing successes in Europe, Representative Condict noted that under our free Government, no



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for such intrusion into personal life. When compulsory vaccination was first seriously considered at the turn of the century it was widely opposed, even by some physicians, as an invasion of personal liberty.<sup>1</sup> The United States Army was one of the few ante-bellum institutions to adopt compulsory vaccination.<sup>2</sup> While states can thus be excused for not exercising their police powers to require compulsory vaccination, state government refusal to appropriate money to subsidize the production of vaccine or the vaccination of the poor is a mystery.

Despite the serious public debate over the efficacy and morality of vaccination,<sup>3</sup> state legislatures and officials were quick to wholeheartedly endorse vaccination as a safe and effective procedure and exhort citizens to submit to vaccination.<sup>4</sup> But even though vaccination clearly had large externality benefits, i.e., the total benefit to society of vaccinating an individual exceeded the benefits to that individual, ante-bellum state governments repeatedly declined to provide any funding for vaccination. The refusal of state governments can not be explained by any of the five historical explanations for the inactivity of 19th century governments.<sup>5</sup>

compulsory measures can be resorted to).

<sup>111</sup> See, e.g., articles in the New York *Medico-Legal Journal* such as Matilda Morehouse, *Compulsory*

*Vaccination and Its Errors*, 13 MEDICO-LEGAL J. 303 (1896); Montague R. Levenson, *Vaccination. Should*

*it Be Enforced by Law?*, 14 MEDICO-LEGAL J. 270 (1896). For a contemporaneous description of the response by courts to compulsory vaccination laws, see *Compulsory Vaccination*, SLAW NOTES (N.Y.)

405 (Dec. 1904).

Compulsory vaccination of the Army began in 1818. See H. DOC. No. 19-90 (1826). The Navy appointed a surgeon in 1816 to visit all ports and vaccinate all seamen, Naval or otherwise. But in the 1820's, the Navy did not see fit to encourage vaccination since the Navy thought that smallpox was uncommon among its ships. See Letter from Samuel Southard to House of Representatives (Mar. 8, 1826) AMERICAN STATE PAPERS, Class 6 (NAVAL AFFAIRS), vol. 2, doc. 301 (1860). But see FANSHER, *supra* note 141, at 1 (smallpox ravaging Navy ships in 1830's: 'United States ships of war have most distressingly been converted into small pox hospitals).

<sup>183</sup> See *supra* Part II.C.1.

See, e.g., THE COW-POX ACT 3-4 (1810) *microformed on* Early American Imprints, Second Series, Fiche 20667 (Readex).

<sup>185</sup> See *supra* notes 36-40.

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Municipal governments sometimes funded vaccination during epidemics. For example, the city of New York provided \$1000 during the epidemic of 1815 to the New York Vaccine Institute for free vaccination of the poor.<sup>7</sup> In July of 1809, after smallpox had entered Boston, the town of Milton organized the first government sponsored vaccination clinic in the United States.<sup>7</sup> The Selectmen vaccinated a quarter of the town, 337 people, in three days—with few exceptions, all that were liable to the Small Pox.<sup>7</sup> Townspeople were charged only 25 cents for vaccination. ‘The town might have appropriated funds to subsidize the cost of vaccination, but certainly obtained the free services of physicians.’<sup>90</sup> The Selectmen of Milton were so excited at their success that they convinced fourteen neighboring towns to undertake similar programs.<sup>91</sup>

The Selectman of Milton, however, soon realized that their means were unequal to their wishes and that assistance from the state government would be required to achieve universal vaccination in Massachusetts.<sup>92</sup> The Selectmen petitioned the governor and the legislature in January 1810 to appropriate funds to establish a comprehensive vaccination program and establish a general organization to encourage vaccination.<sup>193</sup> This general organization would presumably maintain a vaccine supply at distribute it at government expense. The Selectmen also asked the state to mandate local governments to provide

<sup>186</sup> See DUFFY, *supra* note 18, at 248.

~ See THE COW-POX ACT, *supra* note 184, at 1; SMILLIE, *supra* note 10, at 31.

<sup>188</sup> See THE COW-POX ACT, *supra* note 184, at 1. Presumably this meant all those who had not been

previously inoculated, vaccinated, or survived smallpox.

<sup>189</sup> See SMILLIE, *supra* note 10, at 31.

~ The Act which was eventually enacted empowered local governments to raise money for vaccination. See *infra* text accompanying note 195.

~ See THE COW-POX ACT, *supra* note 184, at 1.

<sup>192</sup> *Id.* at 2.

<sup>199</sup> See *id.*



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vaccination clinics.<sup>94</sup> The Massachusetts legislature responded with a short Act which simply sanctioned vaccination and authorized towns to raise money to pay for vaccination if they wished. ~ Massachusetts flatly declined to appropriate funds to established any general organization and ensure that a steady supply of vaccine was available in the state. While the legislature quickly agreed to officially endorse vaccination, they simply did not want to spend any money on vaccination.

Massachusetts' sister states were just as reluctant to spend money on vaccination.

In 1816, a bill was introduced in the New York legislature which would have established a New York State Vaccine Institute in Albany and appropriated \$1000 annually to fund the institute. 96 The Institute would have provided free vaccination for the poor, maintained a constant supply of vaccine, and distributed the same freely to physicians in the state.<sup>97</sup> The legislature failed to pass the Act even though the state was in the middle of an epidemic.<sup>98</sup> A similar Act was rejected by the legislature the following year even though the compensation had been reduced to

Before eventually approaching Congress, James Smith first lobbied the legislatures of Maryland, Pennsylvania, and Virginia for the funds to maintain his Vaccine Institution. In

return he offered to distribute vaccine without charge to the citizens of those states. When he approached the Maryland legislature in 1809 smallpox was occasioning a serious mortality in

~ See *id.*

'See *id.* at 7.

~ Act for Establishing the New-York Vaccine Institution ~ 1, 2 (1816) *microformed on* Early American Imprints, Second Series, Fiche 38419 (Readex).

~ See *id.* ~ 3. The bill also would have authorized the Vaccine Institute to build a medical library, laboratory, and museum and award prizes for the best annual dissection. See *id.* § 5. The original bill had an unexplained provision which prohibited vaccination by any other physician in Albany, essentially granting the Albany Institute a local monopoly. See *id.* ~ 6.

' See *supra* text accompanying notes 80-81.

~ Act for Establishing the New-York Vaccine Institution (1817) *microformed on* Early American

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many parts of the state.<sup>200</sup> The House of Delegates passed a measure which allocated the \$1000 annual emolument Smith had requested, but the Maryland Senate rejected the amount as too much.<sup>201</sup> At the next session, Smith requested just \$1000 for three years and the permission to institute a lottery to raise additional funds for his Vaccine Institution.<sup>202</sup> The Maryland legislature declined to allocate any money directly from the treasury but did agree to authorize Smith to institute a \$30,000 lottery to fund his vaccine institution for six years.<sup>203</sup> In exchange, the legislature required Smith to provide vaccine freely to all citizens of Maryland for six years whether the lottery was successful or not. Though the state refused to provide direct funding, the authorization for the lottery was not a trivial grant. Such lotteries had a quasi-public nature, and adjusted for inflation the lottery could have yielded \$300,000 in 1996 dollars.<sup>204</sup> Unfortunately at the same session, the Maryland legislature also authorized a

\$100,000 lottery to raise money for a monument to President Washington.<sup>205</sup> Needless to say, Smith's vaccine lottery could not compete for support with a lottery to memorialize the Father of the Country. The second lottery also had a much larger, more attractive purse. After many efforts, a reorganization of the lottery, and insuring the lottery with a mortgage

on his own property, Smith's lottery eventually netted \$12,797.20 which was used to support

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This was t

his institution and the free distribution of vaccine. twice the amount proposed in

the 1809 bill, but Smith did have to undertake significant efforts and risk to institute a successful lottery. Smith points out that this was the only case he knew of where a state had

Imprints, Second Series, Fiche 41611 (Readex).

200 SMITH, TWO LETTERS, *supra* note 78, at 3.

201 *See id.* at 5.

202 *See id.* at 5-6.

203 *See* SMITH, PROSPECTUS, *supra* note 54, at 17.

204 *See CPI Conversion Factors 1996*, *supra* note 137.

205 *See* SMITH, TWO LETTERS, *supra* note 78, at 8.

206 *See id.* at 9-11.

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obligated a citizen to provide a service to the state but placed his compensation *at the hazard of lottery*.<sup>207</sup> Nonetheless, in 1816 Smith asked that the law be renewed and another lottery authorized, but the legislature declined.<sup>208</sup>

The legislature of Pennsylvania was even less forthcoming. After providing vaccine to counties of Pennsylvania close to Baltimore, Smith petitioned the Pennsylvania Legislature in 1809 to support his efforts.<sup>209</sup> Smith traveled from Baltimore to Lancaster to lobby the legislature in person and provided them with numerous reports. <sup>210</sup> Smith asked for \$1000 annually in exchange for free distribution of vaccine to the entire state. <sup>211</sup> Pennsylvania was in the midst of an epidemic,<sup>212</sup> and a Pennsylvania Senate committee assert[ed] that there have been more deaths within the last two or three years in this state by the small-pox, than in all the [rest of the] United States combined.<sup>213</sup> The committee blamed our having made no exertions to overcome the prejudices and neglect of our citizens.<sup>214</sup> The committee thus reported on Smith's proposal quite favorably:

[S]hall we refuse to supply our citizens, with the simple, cheap and invaluable means of preservation, from a most loathsome and destructive disease?. .. nothing else seems to be necessary than a supply of pure and genuine Vaccine Matter... Dr. Smith's plan appear to be the most competent, to attain the great object of a general security from Small Pox, of any which has been yet suggested.<sup>215</sup>

<sup>207</sup> *Id.* (emphasis in original).

<sup>208</sup> See SMITH, PROSPECTUS, *supra* note 54, at 26.

<sup>209</sup> His petition to the Pennsylvania legislature initially seems to request just permission to sell the

Maryland lottery tickets in Pennsylvania. This proposal is never mentioned by Smith or the legislature again. See 201. OF SENATE OF PENN. 1809-1810, *supra* note 65, at 203.

<sup>210</sup> See SMITH, PROSPECTUS, *supra* note 54, at 18-19.

<sup>211</sup> See *id.*

<sup>212</sup> See *supra* text accompanying note 76.

<sup>213</sup> 201. OF SENATE OF PENN. 1809-1810, *supra* note 65, at 318-19.

<sup>215</sup> Quoted in SMITH, PROSPECTUS, *supra* note 54, at 19. *But see* 201. OF SENATE OF PENN. 1809-18 10, *supra* note 65, at 318-19 (slightly different text).

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The committee recommended an annual emolument to Smith and financial support for additional vaccine institutions in Pittsburgh and Philadelphia to ensure that the entire state was adequately covered.<sup>2</sup> According to Smith, the bill which was eventually introduced, however, only provided support for one institution in Pennsylvania and no funding for Smith.<sup>217</sup> The bill passed the Pennsylvania House but was defeated in the Senate 14 to 12.

Despite the toll smallpox was taking on its citizens, the Pennsylvania legislature, like Massachusetts, New York, and Maryland, refused to spend any money to provide vaccine for its citizens.<sup>218</sup>

A group of private citizens in North Carolina also petitioned their legislature to appropriate funds to contract with Dr. Smith for free distribution of vaccine.<sup>219</sup> But, the North Carolina legislature 'taking into consideration the low state of our financial affairs,' refused to make such a use of public funds.<sup>220</sup>

Virginia was the only state government in this period which allocated funds to provide for vaccination.<sup>221</sup> In 1813, the Virginia legislature agreed in principle to provide \$600 annually to Dr. Smith to support his free distribution of vaccine in Virginia.<sup>222</sup> However, Virginia required Dr. Smith to travel to the state capital every year to renew his appointment,

<sup>216</sup> Of course, with institutions in Philadelphia and Pittsburgh, very little of the state would have found

Baltimore a more convenient location from which to obtain vaccine. Perhaps this is the source of the animus with which Smith viewed the Committee's proposal. See SMITH, PROSPECTUS, *supra* note 54, at 18.

<sup>217</sup> Perhaps in anger, Smith notes years later that he was informed at the time that the Pennsylvania

citizen to be put in charge of the Pennsylvania Institution was in no way competent. *Id.*

<sup>218</sup> A charitably funded vaccine institution was formed in Philadelphia in 1813. See VACCINE SOCIETY OF

PHILADELPHIA, *supra* note 76.

<sup>219</sup> It is not clear what role, if any, Dr. Smith played in organizing North Carolina citizens to petition their legislature.

<sup>220</sup> JOHNSON, *supra* note 121, at 736.

<sup>221</sup> See SMITH, PROSPECTUS, *supra* note 54, at 20-21.

<sup>222</sup> See An Act for the Free Distribution of Genuine Vaccine Matter, 1814 Va. Acts ch. 14, ~3.

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and come to Richmond every six months to collect his payments.<sup>223</sup> The expense of constantly traveling to Richmond from Baltimore was often not worth the meager \$300 offered, so Dr. Smith missed many trips and many payments.<sup>224</sup> Dr. Smith only managed to receive about \$1500 over the next four years.<sup>225</sup> In 1818, Dr. Smith decided the it was not worth the effort and abandoned the Virginia plan altogether.<sup>226</sup>

The behavior of these state governments is at least puzzling. The wealthiest and most prominent states in the Union—Massachusetts, New York, Maryland, Pennsylvania, and

North Carolina—refused to appropriate \$1000 annually to provide vaccine for their citizens even though they endorsed vaccination itself.<sup>227</sup> Perhaps pure smallpox vaccine was not as hard to come by as it appears. But the states were in the midst of epidemics when they were petitioned, and the epidemics were inevitably the result of inadequate vaccination. Moreover, the legislatures all seem to agree that there was a need for a reliable vaccine supply. No one argued that vaccine institutions were unnecessary. The only articulated opposition was that the amounts requested were too great. But the states were being asked for relatively modest

annual sums, \$10,000 - \$20,000 in 1996 dollars.<sup>228</sup> None of the standard historical explanations

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seems to adequately explain the parsimony of state governments.

Certainly the state governments were not acting in the spirit of Novak's *salus populi* thesis; the governments were not viewing the health of the people as the supreme law. Federalism concerns are inapplicable to state governments; there was no question that the state

<sup>222</sup> See *id.* ~2.

<sup>224</sup> See SMITH, PROSPECTUS, *supra* note 54, at 20. Apparently Dr. Smith could not collect the missed

payments on following visits.

<sup>225</sup> See *id.*

<sup>226</sup> See *id.*

<sup>227</sup> The modest efforts of Virginia do not belie the basic point.

<sup>228</sup> See *CPI Conversion Factors 1996*, *supra* note 137.

<sup>229</sup> See *supra* text accompanying notes 36-40 for descriptions of these standard theories.

<sup>230</sup> See *infra* Part JV.D.

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governments had the authority under the police power to appropriate the sums requested. Moreover, the inactivity of state governments undermines the theory that Constitutional questions alone were tying the hands of the early national government.

While *laissez-faire* explanations at first seem appealing, the argument just does not appear in legislative deliberations. There is no sense that spending on vaccine violated some norm of governance; there was just a feeling that the amounts being requested were too much. The business subsidy thesis also seems difficult to apply. Funding for vaccine and decreasing the severity of smallpox epidemics could only be considered good for the state's business climate just as spending on internal improvements improved a state's economy. Commercial interests would be expected to favor measures which would reduce the disruptive effect of epidemics.

I would propose that a variation on the business subsidy thesis, public choice theory, provides the best explanation for the behavior of state governments. Hard-nosed public choice theory ignores cost-less endorsements and exhortations and focuses on actual subsidies, transfer payments, and regulations. Endorsement of vaccination cost the legislatures nothing and requires little explanation. State governments failed to spend money, however, because the benefits of vaccination, like many public health measures, were widely dispersed over the entire populace. No special interest group was favored; no interest group was willing to trade votes or election funds for an appropriation. There were no drug companies who might benefit from quality controls on vaccine or subsidies for vaccine production. It is even possible, that such legislation was against the interests of physicians.<sup>230</sup> Only Dr. Smith was specifically interested in subsidies for vaccination, and he did not have the resources to offer

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the state legislatures any inducements. He was not even a resident of most of the states concerned.

The surprising decision of the national government to enact the 1813 Vaccine Act, the repeated refusal to appropriate any funding for the Act, and the eventual repeal of the Act throw all of these theories, including public choice theory, into further doubt. No single theory can explain these conflicting actions.

#### IV. The Vaccine Act of 1813: Establishing a National Source of Genuine Vaccine

The reluctance of state governments to act left a void for the federal government to fill. For the first time in the young nation's history, the national government had the clear opportunity to enact legislation to significantly advance the public health and welfare and save countless lives. With surprising ease, the Congress and the President in 1813 enacted ground-breaking legislation establishing a much needed national source of vaccine. Congress effectively established a national vaccine institution by legally mandating that Dr. Smith provide genuine, uncontaminated vaccine to any citizen upon request in return for Congressional endorsement of the franking privilege. The 1813 Act marked one of the first times Congress stepped squarely outside the text of § 8 of Article I.<sup>231</sup> The Act's passage confounds established explanations of 19th century legal history. Though the legislation was emphatically repealed in 1822, the idea was appealing enough to have been raised again a couple of times through the rest of the century.<sup>232</sup>

<sup>231</sup> U.S. CONST. Art I, § 8.

<sup>232</sup> After the 1813 Act was repealed in 1822, bills to revive the institution were introduced by Dr. Smith's supporters in the following Congresses. *See infra* text accompanying notes 463-465. The idea for a national vaccine institution was independently revived in 1838 and 1882. *See infra* Part VII.

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A. *The Need for a National Source of Genuine Vaccine*

There was a significant need for a reliable national source of smallpox vaccine in the early 19th century. There were no state-sponsored institutions, and for-profit institutions were impractical.<sup>233</sup> Charitable vaccine institutions did exist in a few major cities. Vaccine

institutions were formed in New York City in 1802 and in Philadelphia in 1813.<sup>234</sup> In Baltimore, Dr. Smith began his own vaccine institution in 1802.<sup>235</sup> According to Dr. Smith, New York, Philadelphia, and Baltimore were the only cities in the country where a regular supply of vaccine was maintained.<sup>236</sup> The express purpose of these institutions was to provide vaccine to their cities and perhaps the surrounding counties; they showed little interest in providing vaccine to the rest of their states, much less the rest of the country.<sup>237</sup> Rural and frontier populations were left with hardly any reliable source of vaccine.<sup>238</sup> At this time only a small minority of the nation lived in urban areas large enough to support a vaccine institution. In 1810, only 250,000 Americans lived in cities with populations larger than 25,000.<sup>239</sup> Another 300,000 lived in smaller cities of 2,500 to 25,000 inhabitants. The remaining 6,714,000 Americans lived in small towns and rural areas. Every country doctor could certainly not be

<sup>233</sup> See *supra* Part M. for the failure of state governments to take action. See *supra* text accompanying notes 170-175 for the inability of private industry to provide vaccine.

<sup>234</sup> See HALSEY, *supra* note 101, at 51 (New York institution); VACCINE SOCIETY OF PHILADELPHIA, *supra* note 76.

<sup>235</sup> See *infra* text accompanying notes 117-249.

<sup>236</sup> See SMITH, TWO LETTERS, *supra* note 78, at 15.

<sup>237</sup> See HALSEY, *supra* note 101, at 51 (New York institution); NEW YORK INSTITUTION, FACTS AND OBSERVATIONS RELATIVE TO THE KJNE-POCK 6-7 (1802) *microformed on* Early American Imprints, Second Series, Fiche 2791 (Readex) (main object of institution was to spread vaccination among the indigent of the community); VACCINE SOCIETY OF PHILADELPHIA, *supra* note 76.

<sup>238</sup> Of course, it was the major ports of the Eastern Seaboard which were under the most serious threat of smallpox. Nonetheless, smallpox epidemics would eventually spread inland from the major ports. See *supra* text accompanying notes 85-88.

<sup>239</sup> See HISTORICAL STATISTICS, *supra* note 51, at 12 (series A57-69);



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expected to maintain his own supply of cow-pox. As late as the 1880's, Western doctors complained to Congress of the difficulty of obtaining a reliable supply of vaccine.<sup>240</sup>

A national source of vaccine would ensure that vaccine was equally available all across the country. A Congressionally authorized source would provide public confidence in the quality of at least one source of vaccine; the National Agent was legally required to provide genuine, uncontaminated vaccine. Moreover, it was wasteful to have local vaccine institutions across the country duplicating the same efforts.<sup>241</sup> In 1808, England created a National Vaccine Establishment to take over from local institutions the job of performing regular arm-to-arm transfers on healthy subjects and maintaining a ready supply of uncontaminated vaccine.<sup>242</sup> A similar national vaccine institute was also established in France early in the century.<sup>243</sup> In 1813, Congress effectively followed suit.

*B. The Legislative History of the 1813 Vaccine Act*

Although Congressional records from this time period are conspicuously sparse,<sup>2</sup> it is clear that a Baltimore physician, Dr. James Smith, was a central figure in the brief history of the Vaccine Act.<sup>245</sup> He recognized very early that it was indispensably necessary that we should form some plan to secure proper subjects for Vaccination, in regular and uninterrupted succession, by whom we might preserve the Vaccine Matter; and from whom we could always obtain it fresh.<sup>246</sup> In 1802 he formed a vaccine institution in Baltimore.<sup>247</sup> Smith took it

<sup>240</sup> See 13 CONG. REC. 862 (1882).

<sup>241</sup> A few independent, redundant institutions might have been the ideal solution as insurance against accidents at any one institution.

<sup>242</sup> See FENNER ET AL., *supra* note 17, at 263.

<sup>243</sup> See BOARD OF MANAGERS, *supra* note 152, at 2.

<sup>244</sup> See *supra* text accompanying notes 50.

<sup>245</sup> I have not been able to find much biographical data on Dr. Smith. The Harvard University electronic library catalog, *Hollis*, reports that he lived from 1771 to 1841. Search of Harvard On-Line Library Information System (January 23, 1998) (search for AU Smith James 1771).

<sup>246</sup> SMITH, PROSPECTUS, *supra* note 54, at 12.

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upon himself to maintain a continuous supply of genuine vaccine and test the efficacy of his supply regularly.<sup>247</sup> Dr. Smith seems to have become almost obsessed with maintaining his vaccine institution and distributing vaccine freely to the entire nation. He propagated the same sample of cow-pox virus received in 1801 for over twenty years, continuously vaccinating new individuals to maintain the strain,<sup>249</sup> and spent twenty-five years promoting universal vaccination.

After his failed approaches to state governments for funding,<sup>250</sup> Smith lobbied Congress in 1812 and early 1813 to have himself appointed National Vaccine Agent.<sup>251</sup> Smith organized petitions from citizens of Pennsylvania and Virginia asking Congress to provide for the preservation and distribution of the vaccine virus through Dr. Smith free of any expense, to citizens of the United States.<sup>252</sup> The petitions were referred to the House Committee on Post Offices and Post Roads on Jan 14, 1813.<sup>253</sup> Smith himself sent a letter to the Committee asking for a franking privilege and a small annual expense to allow him to distribute the vaccine freely.<sup>254</sup> Out of naivete, or perhaps generosity, Dr. Smith offered to

<sup>247</sup> See *id.* at 11; Affidavit of James Smith, *supra* note 117, at 5.

<sup>248</sup> See SMITH, TWO LETTERS, *supra* note 78, at 4. Vaccine was tested by attempting to inoculate a vaccinated individual with smallpox. If the smallpox inoculation did not affect the individual, the vaccine was effective.

<sup>249</sup> See Letter from Dr. James Smith to Senator Horsey 4 (Jan. 26, 1821) appended to Smith, Report, *supra* note 144.

<sup>250</sup> See *supra* Part III.

~ See SMITH, PROSPECTUS, *supra* note 54, at 11; BRANT, *supra* note 45, at 417. He first approached

Congress in 1811 asking for its patronage and aid to help him introduce vaccination into the District of

Columbia. His 1811 petition was referred to a select committee on January 30, but never acted upon. See

22 ANNALS OF CONG. 839 (1811).

<sup>252</sup> The text of the petitions are included in JAMES SMITH, PROCEEDINGS RELATIVE TO VACCINATION 1-

2 (1813) *microformed on* Early American Imprints, Second Series, Fiche 30392 (Readex). For the original Pennsylvania petition, see Petition of Sundry Inhabitants of the State of Pennsylvania to Congress (Dec. 1812) (on file with the National Archives: Library of Congress H. R. Collection, Box 180) [hereinafter Pennsylvania Petition]. Smith had the petitions printed with a blank space for the name of the state.

Presumably he intended to submit petitions from other states.

- <sup>253</sup> See Pennsylvania Petition, *supra* note 252, at cover page.
- <sup>254</sup> Letter from James Smith to Representative Rhea, Chairman of Committee on the Post Office and

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assume the responsibility for providing vaccine free of charge to the nation without any compensation from the government if the demands of the War of 1812 made it inexpedient to appropriate money for this purpose.- A bill was reported by the Committee the next day.<sup>255</sup> Not surprisingly Congress took Dr. Smith up on his offer to obligate himself without any compensation. The bill sailed through the war-time Congress. After minimal debate, the House passed the bill within the week.<sup>257</sup> The Senate concurred a month later without any significant opposition.<sup>258</sup> President Madison unhesitatingly signed the bill into law on February 27th.<sup>259</sup> Shortly after the Act's passage, Dr. Smith was appointed the first National Vaccine Agent by President Madison.<sup>260</sup> Dr. Smith served as the National Vaccine Agent for nine years until his commission was revoked and the Act repealed in 1822 following the Tarboro Tragedy.<sup>261</sup>

Thus, without any significant controversy, Congress in 1813 enacted groundbreaking public welfare legislation without any textual basis in Article I of the Constitution.<sup>262</sup> Despite the controversy surrounding the practice of vaccination,<sup>263</sup> Congress unmistakably endorsed vaccination. It implicitly approved the safety and efficacy of a biologic drug and

Post Roads (Jan. 15, 1813) in SMITH, PROCEEDINGS, *supra* note 252, at 2. <sup>255</sup> *See id.*

<sup>256</sup> *See* H.R. 229, 12th Cong., 2nd Sess. (1813). The original is available at the National Archives. *See* H.R.

229, 12th Cong., 2nd Sess. (1813) (on file with the National Archives: House Documents, Box 12A-B1,

Original House Bills). Only trivial amendments were made to the bill related to enforcement of the limits on the franking privilege. *See infra* note 272.

<sup>257</sup> *See id.*; 25 ANNALS OF CONG. 95, 844, 958, 1080-81 (1813).

<sup>258</sup> *See* 25 ANNALS OF CONG. 98, 101, 106, 107 (1813).

<sup>259</sup> *See* BRANT, *supra* note 45, at 417.

<sup>260</sup> By April, Dr. Smith had already widely publicized his new appointment. *See* Letter from Francis Le

Barron to Dr. James Smith (Apr. 12, 1813), *supra* note 44 *See also*, BRANT, *supra* note 45, at 417.

<sup>261</sup> *See infra* Part VI.

<sup>262</sup> At this time Congress did not interpret the Commerce or General Welfare Clauses, U.S. CONST, Art. I, § 8, cl. 1, 3, as expansively as is common today. *See* Mayer, *supra* note 4s Arguing that vaccine distribution as a Congressional prerogative under the Commerce Clause would have been very controversial.

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sought to encourage public acceptance of the drug. One of James Smith's purposes in lobbying for the Act was to use the Congressional endorsement to overcome public skepticism of vaccine.<sup>264</sup> Congress also recognized the need for a semi-public national source for the smallpox vaccine. This was not a matter to be left to the states or the private sector. Congressional endorsement led to public confidence in the efficacy and legitimacy of at least one source of vaccine.<sup>265</sup> People could depend on vaccine from Dr. Smith to be authentic and uncontaminated with other diseases. The National Vaccine Agent was required to preserve the genuine vaccine matter and to furnish the same to any American. Overnight, Smith's Baltimore vaccine institution was transformed into a national source of vaccine—obligated under penalty of federal law to maintain a supply of vaccine indefinitely between outbreaks and distribute safe vaccine upon request. Congress had de facto established a national vaccine

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institute.

Congress also provided a significant subsidy for the distribution of the drug; the Act provided free franking to or from the Agent of packages up to one half ounce related to vaccination.<sup>267</sup> The value of the franking privilege at the time should not be underestimated. In 1813, postage on a half ounce package was \$0.24 to \$1 depending on the distance.<sup>268</sup> An additional payment to the mail carrier was necessary for city delivery. <sup>269</sup> Adjusted for inflation, the postage savings amounted to \$3 to \$11 per package by the time the Act was

<sup>265</sup> See *supra* Part II.C.1.

<sup>264</sup> See Affidavit of James Smith, *supra* note 117, at 5.

<sup>265</sup> See *id.*

<sup>266</sup> Smith did not begin referring to his institution as the National Vaccine Institution until 1818. See SMITH, PROSPECTUS, *supra* note 54.

<sup>267</sup> See Act to Encourage Vaccination, ch. 37, ~ 2, 2 Stat. 806 (1813) *repealed by* An Act to Repeal the Act to Encourage Vaccination, ch. 50, 3 Stat. 677 (1922).

<sup>268</sup> See HISTORICAL STATISTICS, *supra* note 51, at 807 (series R190). Prices in HISTORICAL STATISTICS are given in sheets. I have assumed that four sheets constituted a half ounce.

<sup>269</sup> See *id.* at n. 6.

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repealed.<sup>270</sup> This was a considerable subsidy. The franking privilege was taken very seriously by Congress. Most of the half-page Act consist of provisions intended to strictly limit Smith's use of the franking privilege.<sup>271</sup> The only two amendments made to the original bill were phrases intended to strictly control the privilege of the frank.<sup>272</sup> Previously Congress had granted the franking privilege only the likes of high Executive officers, members of Congress, former Presidents and their widows.<sup>273</sup>

*C Explaining the 1813 Vaccine Act*

It is difficult to reconcile the 1813 Act and related legislative episodes with standard historical explanations for the ante-bellum federal government's relative inactivity. It is particularly difficult to account for the ease with which Congress passed the 1813 Act and the repeated refusals over the following years to provide the Vaccine agent with even modest funding.<sup>274</sup> Certainly the refusal to fund the Agent undermines any notion that Congress was acting under the *salus populi* thesis, placing the health of the people above all else. There is simply no discussion in the record referencing norms of *laissez-faire* capitalism. Besides the provisions of the 1813 Act itself seem to violate those very norms. Dr. Smith does not appear

<sup>270</sup> See *CPI Conversion Factors 1996*, *supra* note 137.

<sup>271</sup> See 2 Stat. 806, § 2 (1813).

<sup>272</sup> The emphasized phrases in the following excerpts were added to the original bill. That all letters or packages, not exceeding half an ounce in weight, containing vaccine matter, or relating to the subject of vaccination, *and that alone*, shall be carried. .. free of any postage. .. [for violation thereof] he shall on conviction of every such offense, forfeit and pay a fine of fifty dollars, *to be recovered in the same manner as other fines or violations of law establishing the post-office*. (emphasis added) Compare 2 Stat. 806, ~ 2 (1813) with HR. 229, 12th Cong., 2nd Sess., ~ 2 (1813), *supra* note 256.

<sup>273</sup> See, e.g., Act to Establish Post-Office & Post Roads, ch. 7, ~ 19, 1 Stat. 232 (1791) *reenacted* ch. 23, ~ 19,

1 Stat. 354, 361-62 (1794) (President, Vice-President, Congressmen during attendance, Secretaries of

Treasury, State, and War, Postmaster General, Comptroller); Act to Extend the Privilege of Franking to

the Secretary of the Navy, ch. 56, 1 Stat. 569 (1798); Act to Extend the Privilege of Franking... to

Martha Washington, ch. 18, 2 Stat. 19 (1800); Act Freeing from Postage... John Adams, ch. 9, 2 Stat. 102

(1801) (President John Adams after his retirement).

<sup>274</sup> See *infra* Part V.

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to have had the political or financial capital to induce Congress to grant him such a valuable position under any public choice analysis.

Perhaps there were concerns over the federal power to spend money for vaccine. It was certainly raised repeatedly in debates over funding the Vaccine Agent and repealing the 1813 Act.<sup>275</sup> In the 1822 debate over the repeal of the Act, even a supporter of Dr. Smith, Representative Condict, recalled that though many wanted to provide Smith a salary in 1813, some doubted the Constitutional power of Congress to apply the public money in this way.<sup>276</sup> The frank can be explained away as an exercise of Congressional authority to Establish Post Offices.<sup>277</sup> The problem with the Constitutional argument, however, is that Congress did not have any explicit power to demand that an individual preserve the genuine vaccine matter and furnish the same to every American.<sup>278</sup> How can Congress have the latter power, but not the power to allocate \$1500 in support of its mandate? I suppose its possible that such inconsistent interpretation of the Constitution might have been accepted at the time, but none of the opponents of the Act were ideologically committed to federalism. There was always some other dominant political motivation.<sup>279</sup> Federalism was never more than a throw-away line. Moreover, federalism certainly was not inhibiting the states from

<sup>275</sup> See *infra* text accompanying notes 343-349, 354, 444-451.

<sup>276</sup> 39 ANNALS OF CONG. 1637 (1822).

<sup>277</sup> U.S. CONST. Art. I, § 8, cl. 7.

<sup>278</sup> There is a suggestion first made in the 1822 debate over the repeal of the 1813 Act, that Congress never had the power to enforce the demands it placed on the National Vaccine Agent. Once Dr. Smith had failed to furnish the genuine vaccine matter to every citizen, Congress was left with no legal recourse. See 39 ANNALS OF CONG. 1635-39 (1822). This interpretation is suspect on a couple of different grounds. First, it was never raised in an earlier discussion of the Act or its expansion. Second, while legislation has been declared unenforceable by the courts, it is difficult to imagine Congress intentionally passing wholly hortatory, unenforceable legislation. Third, had Congress had such an intent in 1813, it could have easily required Dr. Smith to post a bond payable to the President to guarantee his compliance.

<sup>279</sup> See *infra* text accompanying notes 343-349, 354, 444-451.

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devoting funds to vaccination; some other policy was repressing their concern for the health of the public.

It is possible that Congress' attitude can be explained under the business subsidy thesis. Perhaps Congress viewed Dr. Smith not as a public servant, but as a private entrepreneur deserving of a legislative advantage much like companies building toll roads or bridges were supported by state legislatures at this time.<sup>280</sup> Though Smith did not consider himself a private operator, certainly his critics often assailed him as the beneficiary of a federal monopoly.<sup>281</sup> In this case, Congress might have seen the franking privilege as part of a business franchise but viewed direct financial grants as wholly inappropriate for a profit-making business. While there is little in Congressional records to support such an interpretation, it is plausible.

At least for the failure to provide funding for Dr. Smith in the 1813 Act itself, there are more mundane explanations. The government might have legitimately needed all available funds to pursue the War of 1812. The nation ran large budget deficits for the first time between 1812 and 1815 due to ballooning expenditures on the Army.<sup>282</sup> It is also possible that Congress failed to appropriate money for Dr. Smith simply because Dr. Smith did not demand it strongly enough. In a letter to Representative Champion in the previous Congressional session, Dr. Smith had asked Congress only to provide people requesting vaccine reduced postage or more gratifying to me free postage.<sup>283</sup> He makes no mention whatsoever of any direct payments. In his 1813 letter to the select committee considering his petitions, he offered to become the National Vaccine Agent without any funding whatsoever

<sup>280</sup> See HANDLIN, *supra* note 37.

<sup>281</sup> See *infra* text accompanying notes 286-290.

<sup>282</sup> See 1-LISTORICAL STATISTICS, *supra* note 51, at 1104 (series Y336-37), 1115 (series Y458).

<sup>283</sup> See Letter from James Smith to Rep. Champion (Mar. 23, 1812) (on file with Harvard Medical



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if Congress thought expedient.<sup>284</sup> Smith's ambivalent attitude is not surprising considering his simultaneous effort to obtain state funding. At this time his Maryland lottery had finally begun to bear fruit,<sup>285</sup> and he might still have had hopes that states like Virginia and Pennsylvania would lend their support. While state governments could always provide him with money, they could not grant him the valuable franking privilege; only Congress could do that. None of this explains Congress' later refusals to fund Dr. Smith. But even without direct funding, the 1813 Act managed to arouse opposition to Smith's position and franking privilege.

*D. Opposition to the National Vaccine Agent and the 1818 Proposal for State Vaccine Agents*

There was significant opposition to the 1813 Act after its passage based not on grounds of federalism or *laissez-faire* capitalism but based anti-monopoly sentiment and the financial interests of physicians. Dr. Smith claimed that many considered his position in the envious light of a monopoliser [sic].<sup>286</sup> Even though it does not appear possible that a vaccine distributor could have made a profit,<sup>287</sup> there was still much resentment directed towards Dr. Smith's favored position. He was not seen by some as a public servant, but as a private operator who had obtained the favor of the government. With his valuable franking subsidy and the endorsement of the national government, Smith seemed to be one of those privileged insiders of whom the Jacksonians complained. People believed that he was making large sums from his appointment.<sup>288</sup> The amount of criticism Smith was receiving can perhaps be gauged

(School's Countway Rare Book Library).

<sup>284</sup> See Letter from James Smith to Representative Rhea, *supra* note 254, at 2.

<sup>285</sup> See *supra* text accompanying note 206.

<sup>286</sup> Smith, Report, *supra* note 144, at 6.

<sup>287</sup> See *supra* text accompanying notes 170-175.

<sup>288</sup> See Smith, Report, *supra* note 144, at 5; SMITH, TWO LETTERS, *supra* note 78, at 2.

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by his tirade against critics in a 1820 report to Congress.<sup>289</sup> Smith felt besieged enough to defend his public service and attack his critics at length. Smith concluded by noting that his best efforts can only increase the catalogue of ungenerous accusations, which a suspicious and ungrateful world will ever be ready to make against him.<sup>290</sup>

Smith attributed the bulk of the criticism not to anti-monopoly sentiments but to the greed of physicians. Dr. Smith was a major advocate of lay vaccination; he believed that with proper instructions and a supply of genuine vaccine, laypersons could vaccinate each other without resort to physicians.<sup>291</sup> Smith would routinely send vaccine with instructions to laypersons, eliminating the need for local physicians to administer vaccinations.<sup>292</sup> Though governments seemed to believe that lay vaccination was effective,<sup>293</sup> needless to say the practice was opposed physicians' groups as dangerous.<sup>294</sup> Smith compounded the problem for physicians by offering free certifications of vaccination. Because of public mistrust of the vaccine supply and doubts as to whether vaccination had been correctly performed, people were often uncertain of whether they had indeed gained immunity to smallpox. Physicians were consulted to determine the authenticity of vaccinations; physicians either examined the vaccination site or subjected the patient to variolation. Smith interfered with this business by offering to certify vaccinations by examining samples of vaccine scabs sent to him through the mail. <sup>299</sup>

<sup>289</sup> Smith, Report, *supra* note 144, at 6.

<sup>291</sup> SMITH, TWO LETTERS, *supra* note 78, at 33.

<sup>292</sup> See Letter from James Smith to Senator Lloyd (Apr. 25, 1822) *appended to* H. Rep. No. 17-48 (1822).

<sup>293</sup> 20 J. OF SENATE OF PENN. 1809-1810, *supra* note 65, at 201.

<sup>294</sup> See, e.g., Report on the Failures Attributed to the Vaccine in Charleston (1817) *microformed on* Early

American Imprints, Second Series, Fiche 41394 (Readex); MEDICAL SOCIETY OF THE COUNTRY OF NEW

YORK, *supra* note 66s, at 15 (directly attacking Smith's support for lay vaccination in his 1816

Memorial); Smith, Report *supra* note 144, at 7.

<sup>298</sup> See Letter from James Smith to Senator Lloyd (Apr. 25, 1822) *appended to* H. Rep. No. 17-48 (1822).

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According to Smith the efforts of his agents to hold mass educational meetings on vaccination and vaccinate a hundred or two hundred people also aroused the ire of physicians.<sup>297</sup> The charitable efforts of his agents had

often given great offense to many practitioners [physicians] of selfish & contracted views, who complain, that we thus take a business from them; which they think themselves privileged to turn to their own particular advantage... [and] indulge a hope that some day might come when they would derive a little profit from vaccination or reap perhaps an abundant harvest from such a loathsome and fatal plague as the Small Pox.<sup>297</sup>

Though Smith might have been exaggerating the extent of opposition from physicians groups and Jacksonians, some evidence of the growing opposition to Smith's alleged privileges can be found in a strange 1818 bill. The House passed a bill which invited each state to appoint its own vaccine agent and extended the franking privilege to all these state agents.<sup>297</sup> The bill was rejected by the Senate on a 17-12 vote as unnecessary, bad precedent, and subject in itself to abuse.<sup>299</sup> Either the senators thought it dangerous to extend the frank to so many individuals or the senators were defending Dr. Smith's position. While there is negligible legislative history for the bill, it was probably an indirect attack on Dr. Smith since the bill did not have any other obvious purpose.<sup>300</sup> There was little point in each state having its own agent maintaining a separate vaccine supply; such redundancy would

Though Smith claims that he could verify the authenticity of a vaccination by examining a scab, there was considerable medical controversy over this procedure.

<sup>296</sup> See *infra* text accompanying notes 372-Error! Bookmark not defined..

<sup>297</sup> Smith, Report, *supra* note 144, at 7-8.

<sup>298</sup> See H.R. 29, 15th Cong, 1st Sess. (1818); 32 ANNALS OF CONG. 1452 (1818).

29931 ANNALS OF CONG. 299 (1818). The bill as slightly amended by a Senate Committee is on file at the

National Archives. See H.R. 29 *as amended*, 15th Cong, 1st Sess. (1818) (on file with the National

Archives: Senate Documents, Box iSA-Cl, House Bills).

<sup>300</sup> The bill does not seem to have been drafted to address federalism concerns since Smith's appointment was not withdrawn. Encouraging state agents would not have solved any Constitutional problems with federal appointment of a vaccine agent.

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clearly be a waste.<sup>301</sup> Thus the bill seems to have been a sign of growing unease with Smith's supposed monopoly. Smith, himself, appears to have viewed the 1818 bill as an attack on his office. He condemned Attempts... by some, who are professedly hostile to every National Establishment, to take the Management of this Plan out of my hands, to give it to others who would be under the immediate direction and control of the State Authorities. **302**

It is not clear how large a role anti-monopoly sentiments or opposition from physician's interests played in the eventual repeal of the Act. Certainly the rhetoric of Smith and his opponents during the Tarboro Tragedy was redolent with these themes, but perhaps the rhetoric was little more than that. In Part VI, I argue that simple anger over the scandal was the ultimate cause of the 1813 Act. Despite the opposition described, there was also considerable support expressed for Smith's efforts, and Congress seriously considered massive expansions of the 1813 Act a number of times over the following years.

V. Proposals to Ensure Funding for Smith's National Vaccine Institute Even though some viewed Dr. Smith as a monopolizing profiteer, he always

viewed himself as a public servant. Smith never wanted to charge for vaccine. His goal throughout this story remained to maintain a vaccine supply and distribute vaccine to the populace freely in order to encourage universal vaccination. When regular funding from states governments failed to materialize,<sup>303</sup> Smith approached Congress for financial support. Proposals for direct funding of a National Vaccine Institute were rejected by Congress in 1816, 1817, and 1818. For possible explanations of Congress' repeated failures to fund the Vaccine Agent, see Part IV.C. After being repeatedly rebuffed, Smith finally decided to privately raise

<sup>301</sup> While there might certainly be a value to redundant vaccine institutions, one for every state seems rather excessive.

<sup>302</sup> Smith, Report, *supra* note 144, at 9.

~ In 1816, even Maryland refused to reauthorize a lottery. *See supra* text accompanying note 208.

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a charitable endowment for his institution, but Congress refused to grant him a corporate charter. Each of the rejected proposals would have not only guaranteed the continuity of the vaccine supply, but also resulted in the widespread distribution of free vaccine to the populace. Had any of the proposals been enacted, it would have been an unparalleled milestone in Federal support for the public welfare. Before he could further pursue his plans, the Tarboro Tragedy effectively ended his career.

A. *The Finances of the National Vaccine Agent*

Even though Congress clearly expected the Agent to charge for vaccine, Dr. Smith largely distributed smallpox vaccine without charge. He knew both that he could never sell enough vaccine during epidemics to recoup the cost of maintaining vaccine and that the public would not tolerate being charged by the National Vaccine Agent. Upon being appointed, he immediately agreed to provide the military with free vaccine through the War of 1812<sup>304</sup> and continued to do so for years after the war ended.<sup>305</sup> He distributed vaccine without charge to the poor<sup>306</sup> and all surgeons who asked for it.<sup>307</sup> Nine Baltimore physicians stated in 1818 that for more than eight years past, we have always received the genuine Vaccine Matter, free of any charges from Dr. James Smith.<sup>308</sup> Smith also claimed that by tracking the requests for vaccine he was receiving, he could trace with considerable accuracy the daily progress which the Small Pox made in the United States, and in response he would pro-actively mail vaccine to the postmasters in the path of the spreading epidemic.<sup>309</sup>

<sup>304</sup> See Letter from Dr. James Smith to Francis Le Barron, Surgeon U.S. Army, at 2 (Apr. 14, 1813) *copy appended to Smith, Report*, *supra* note 144.

See Letter from Francis Le Barron, Surgeon U.S. Army, to Dr. James Smith (Nov. 5, 1816), *supra* note 145; Letter from James Smith to Senator Horsey (Jan. 26, 1821), *supra* note 249, at 6.

<sup>306</sup> See SMITH, PROSPECTUS, *supra* note 54, at 25.

<sup>307</sup> See SMITH, 1816 MEMORIAL, *supra* note 149, at 4.

<sup>308</sup> See James Cromwell, et. al., Physician's Certificate *in* SMITH, PROSPECTUS, *supra* note 54, at 9.

<sup>309</sup> SMITH, PROSPECTUS, *supra* note 54, at 24.

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In 1819, Smith hired a number of agents to distribute vaccine and collect contributions for his Vaccine Institution.<sup>310</sup> These agents were instructed not to charge for their services but to vaccinate the young and the old, the rich as well as the poor; and to give the genuine matter [vaccine] to every intelligent family who may wish to inject it for themselves.<sup>311</sup> Smith claimed that his agents vaccinated 100,000 people free of charge in 18 19-1820 alone.<sup>312</sup> Smith's estimate does not seem to be an exaggeration even though there was no major epidemic in this period. The population of the six states his agents frequented was only 2.8 million,<sup>313</sup> so he is only claiming that his agents vaccinated 3.6% of the population of these states in two years. Since he was employing about ten agents at any given time,<sup>314</sup> each agent would have needed to vaccinate an average of 5000 people per year.

James Smith grew increasingly frustrated at the refusal of state governments and then the federal government to financially support his efforts.<sup>315</sup> He began to complain bitterly about how Congress and the states had failed to pay him for his troubles.<sup>3</sup> When Congress refused in 1817 to reimburse him for the vaccine he was providing the Army, Smith became angry and threatened to stop supplying the Army with vaccine. ~ The Surgeon General of the Army quickly agreed to pay the \$1500 Smith demanded. Smith eventually decided that the goal of free distribution of vaccine was unavoidably postponed given the

<sup>310</sup> *infra* text accompanying notes 372-Error! Bookmark not defined..

<sup>311</sup> Smith, Report, *supra* note 144, at 4.

<sup>312</sup> See Smith, Report, *supra* note 144, at 8-9. *But see* 39 ANNALS OF CONG. 1637-38 (1822) (Congressional

supporter of Smith's claimed in 1822 that his efforts had vaccinated only the very modest figure of 50,000

- 100,000 people in 9 years).

<sup>313</sup> See HISTORICAL STATISTICS, *supra* note 51, at 35-36 (series A199);

<sup>314</sup> See *infra* text accompanying note 373.

<sup>315</sup> For the reluctance of state governments, see *supra* Part III. For the refusal of Congress, see the remainder of Part V.

<sup>316</sup> See, e.g., Letter from Dr. James Smith to Francis Le Barron (Apr. 14, 1813), *supra* note 304, at 2; SMITH, PROSPECTUS, *supra* note 54, at 25; Letter from James Smith to Senator Horsey (Jan. 26, 1821), *supra* note 249, *passim*.

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government's failure to financially support his vaccine production and distribution and tried to begin charging for vaccine. In 1818, after nine years of trying to obtain government funding, Dr. Smith announced that he would henceforth charge the public \$5 for a supply of vaccine.<sup>317</sup> He was unable to collect much money from vaccine sales, however. The public resented being charged for vaccine by the National Vaccine Agent. Smith complained that The Agent, however, ought not to be permitted to charge any fees for his services. His fees, as I have experienced. . . are odious. **319** People assumed that the National Vaccine Agent was a government employee paid by Congress; they were suspicious of Smith's attempt to charge them.<sup>320</sup> In attempting to charge for vaccine, Dr. Smith felt that he must always be placed in the estimation of the public on the degrading level with every advertising Quack or Impostor, who expects to enrich himself upon the suffering of his fellow creatures. **321**

Nevertheless, between the Maryland lottery, the Virginia appropriation, and payments from the Army, Smith had collected over \$15,000 by 1818. He collected another \$11,000 in the next couple of years in private donations.<sup>322</sup> He was probably not being pushed into penury, and may have even been making a nice living off of his appointment. He acknowledged with thankfulness the receipt of my pecuniary reward, you will, I hope perceive, that it has not been extravagant, nor of such amount as should be complained of as inconvenient, either to the public or to any private citizen. **323** On the other hand, in response to the attack on his position following the Tarboro Tragedy, Smith claimed that he had spent more on printing and stationary alone, to furnish proper directions for the popular [lay] use

<sup>317</sup> See *infra* Part VI.C.

<sup>318</sup> See SMITH, PROSPECTUS, *supra* note 54, at 26, 29, 32.

~ See Smith, Report, *supra* note 144, at 4.

<sup>320</sup> See Letter from James Smith to Senator Horsey, *supra* note 249, at 2.

<sup>321</sup> Smith, Report, *supra* note 144, at 5.

<sup>322</sup> See *infra* text accompanying notes 379-381.

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of the kine-pock. . . . than all the fees I ever received for vaccine matter since.. . . 1813.<sup>324</sup> Moreover, Smith had mortgaged his private property to guarantee the Maryland lottery's

<sup>32</sup>

success, and posted a \$40,000 bond to ensure that donations would be used not for his private gain but to endow a permanent national vaccine institution.<sup>325</sup> Whatever Smith's

ability to support himself without government funding, Congress pointedly refused to appropriate money to support his vaccine institution.

*B. Proposals for Comprehensive National Distribution of Vaccine in the 14th Congress*

After the War of 1812, the 14th Congress seriously considered paying for the comprehensive distribution of free vaccine throughout the nation. Dr. Smith petitioned Congress in January 1816 emphasizing that his intent all along had been to provide free vaccine to the populous with some financial support from Congress.<sup>327</sup> Since peace... now again smiles on our happy Country, Smith asked Congress to increase its support for his efforts.<sup>328</sup> Smith proposed an odd and highly impractical plan to extirpate the Small Pox without any expense to the National Government. <sup>329</sup> He sought to overcome the inability to successfully sell vaccine by imposing a small federal tax on every vaccination conducted by a physician. This tax would be used to support Smith's vaccine institution and the free distribution of vaccine. Smith thought perhaps 6~/4 cents per vaccination would suffice initially but a smaller fee would be sufficient if and when vaccination became more universal.<sup>330</sup> Smith also offered to maintain a record of everyone vaccinated throughout the

<sup>323</sup> SMITH, PROSPECTUS, *supra* note 54, at 25-26.

<sup>324</sup> Letter from James Smith to Senator Lloyd (Apr. 25, 1822) *appended to* H. Rep. No. 17-48 (1822).

<sup>325</sup> *See supra* text accompanying note 206.

<sup>326</sup> *See infra* text accompanying note 370.

<sup>327</sup> *See* SMITH, 1816 MEMORIAL, *supra* note 149, at 4.

<sup>328</sup> *Id.* at 5.

<sup>329</sup> *See id.* at 9-12.

<sup>330</sup> *Id.* at 11, n. 4.



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country and provide annual reports to Congress)<sup>31</sup> The plan was obviously untenable. Direct federal taxes were almost unheard of at the time. Dr. Smith does not explain how the federal government with its tiny bureaucracy in 1816 could have possibly collected such a tax. Raising the price of vaccinations, even marginally, would appear, at least at first glance, to be a *deterrent* to vaccination. Moreover, even such a small tax on vaccinations appears shockingly self-serving. We can imagine that news of this ill-advised proposal would have increased the opposition of physicians and Jacksonians to his position.

Not surprisingly, Congress showed absolutely no interest in Smith's foolish plan. Instead, in February 1816, a bill was introduced in the House which would have funded through general revenues a significant administrative bureaucracy to distribute smallpox vaccine freely throughout the United States.<sup>32</sup> The ambitious bill would have provided the Vaccine Agent with \$1500 for his services.<sup>33</sup> In exchange, Dr. Smith would have agreed not to accept money from state or local governments and to provide to any Citizen of the United States... the genuine vaccine matter... *free of any cost, charge, or expense whatsoever*.<sup>34</sup> Most importantly, the Vaccine Agent was required to supply postmasters throughout the country with at least five parcels of fresh vaccine every three months. ~ The postmasters were instructed to distribute the vaccine in their communities as needed. The bill effectively made postmasters throughout the country local repositories of vaccine supplies and subordinates of the National Vaccine Agent. Clearly, a significant vaccine factory would need to be

<sup>331</sup> See *id.* at 12.

<sup>332</sup> See H.R. 73 *as amended*, 14th Cong., 1st Sess. (1816) (on file with National Archives: House Documents, Box 14A.B1, Original House Bills). The unamended bill is microformed on Early American Imprints, Second Series, Fiche 39298 (Readex). Section two of the original bill required the

Vaccine Agent to supply just one officer in New Orleans with a continuous supply of vaccine. Before

debate on the bill, it was amended to provide for the entire country. See *id.*

~ See *id.* ~ 4.

~ See *id.* § 1 (emphasis added).

~ See *id.* ~ 2 This provisions is reminiscent of Smith's practice of proactively sending vaccine to post.

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established in Washington or Baltimore to supply such massive quantities of vaccine. If the bill had been enacted, vaccine would be continuously kept on-hand in every part of the country. Properly implemented, there would have never been a shortage of vaccine in the United States again. The bill also imposed Congressional reporting requirements on Dr. Smith<sup>33</sup>, and mandated compulsory military vaccination.<sup>337</sup>

Unfortunately, no action was taken on the bill until very late in the session, just before it ended on April 30.<sup>338</sup> During the initial discussions of the bill there was general support for the measure. After much debate on April 19, the Vaccine Agent's annual compensation was set at \$1500.<sup>339</sup> Adjusted for inflation that is approximately \$14,000.<sup>340</sup> On April 27, a motion to kill the bill was defeated, and the bill's duration was extended from three years to seven years.<sup>341</sup> Just two days later, however, the bill was postponed indefinitely on a 49 to 48 vote.<sup>342</sup> The opposition to the bill was led by Daniel Webster (serving as a representative from New Hampshire in his first term in Congress) and Representative Pickering of Massachusetts.

Webster and Pickering first argued, quite reasonably, that since the Congressional session was at an end, there was not enough time for proper consideration of the bill. They also argued, however, that the \$1500 appropriation was outside of Congress' Constitutional authority.<sup>343</sup> While the scope of Congress' power during this period was a contentious issue,

masters in areas threatened with smallpox. *See supra* text accompanying note 309.

<sup>336</sup> *See id.* ~ 3.

~~~ *See* 29 ANNALS OF CONG. 1455 (1816).

, *See* 10 HOUSEJ. 767 (1816).

” *See* 29 ANNALS OF CONG. 1408 (1816).

³⁴⁰ *See CPI Conversion Factors 1996, supra* note 137.

³⁴¹ *See* 29 ANNALS OF CONG. 1455 (1816); H.R. 73 *as amended, supra* note 332, at § 6.

³⁴² *See* 29 ANNALS OF CONG. 1457 (1816).

~ *See* 29 ANNALS OF CONG. 1457 (1816).

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Webster and Pickering's resort to federalism appears disingenuous.³⁴⁴ First, federalism was never once mentioned during the debates over the bill in the proceeding past two weeks.³⁴⁵ Second, Pickering championed the Bonus Bill of 1817 which was widely considered to expansively interpret the grant of power to Congress and was vetoed by President Madison on grounds of federalism.³⁴⁶ Daniel Webster also supported the Bonus Bill.³⁴⁷ Third, at no time does anyone propose the repeal of the original Act. If providing \$1500 for the Vaccine Agent violates Article I, then so certainly does legally mandating that Dr. Smith furnish. . . to any citizen the genuine vaccine matter.³⁴⁸ Finally, if federalism was the House's real concern with the bill, it would have looked more favorably on Dr. Smith's 1818 request for funding for individuals clearly under federal sovereignty.³⁴⁹

Seemingly undaunted, Dr. Smith again petitioned Congress in December 1816, at the beginning of its next session. He asked Congress to make some suitable provision., to enable him to supply [vaccine] free of any charges to the citizenry.³⁵⁰ For good measure Dr. Smith emphasized the need of the military for smallpox vaccine. A few days later one of Dr. Smith's champions, Representative Condict, introduced a bill substantively similar to the previous sessions' bill.³⁵¹ Again, there was a lengthy debate over the amount of compensation for Dr. Smith. And, again the House finally settled on \$1500 given that Dr. Smith was

' *But see* SMITH, PROSPECTUS, *supra* note 54, at 27 (claiming Congress refused to appropriate a salary for him due to Constitutional concerns).

~' *See* 29 ANNALS OF CONG. 1408, 1455 (1816).

346 *See supra* note 45. The Bonus Bill allocated for internal improvements, i.e., roads and canals, the \$1.5 million received from the First Bank of the United States for its charter.

~ *See* 31 ANNALS OF CONG. (1817).

~' 2 Stat. 806, § 1 (1813). *But see supra* note 278.

'v *See* Part V.C.

³⁵⁰ Letter from James Smith to Congress (Dec. 6, 1816) *in* 30 ANNALS OF CONG. 254 (1817).

~ *See* H.R. 6, 14th Cong., 2d Sess. (1816).

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expected to continue in private practice while serving as Vaccine Agent.³⁵² There was no discussion of Congressional authority to enact such a bill. Once again the bill was defeated; this time on a 87 to 55 vote.³⁵³ Representative Atherton led the opposition in 1817. Atherton briefly argued that § 8 did not grant Congress the authority to spend money on vaccine³⁵⁴ to which supporters responded by citing the bill's benefits to the military and Congress' power under the General Welfare Clause.³⁵⁵ Once again, however, federalism appears to be a throwaway argument.³⁵⁶ The focus of Atherton's lengthy speech was the bill's support of lay vaccination, i.e. the distribution of vaccine to laypersons for self-medication.³⁵⁷ I can not conceive of a more direct method of endangering the health and life of the patient [than lay vaccination].³⁵⁸ He argued that because of its support of lay vaccination instead of being a bill for the encouragement of vaccination, ought to be called a bill... to bring vaccination into disrepute.³⁵⁹ Either Atherton honestly believed that lay vaccination was dangerous or he as defending the interests of physicians whose business position was totally undermined by the bill's provisions.

C. *The 1818 Proposal to Fund Vaccine for Washington, Federal Territories, and the Military*

After Congress had twice failed to provide him with direct compensation for a national program of vaccine distribution, Dr. Smith decided to change tacks. He asked Congress in January 1818 for a \$1500 annual emolument to support the provision of the

³⁵² See 30 ANNALS OF CONG. 361 (1817).

~ See *id.* at 470.

~ U.S. CONST. Art. 1, ~ 8. See 30 ANNALS OF CONG. 469 (1817).

~ U.S. CONST. Art. 1, § 8, cl. 1. See 30 ANNALS OF CONG. 470 (1817).

³⁵⁶ See *supra* text accompanying notes 343-349.

~ See 30 Annals of Cong. 469-70 (1817). See *supra* text accompanying notes 291-295 for discussion of Smith's support of lay vaccination.

³⁵⁸ See 30 Annals of Cong. 470 (1817).

~ *Id.*

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vaccine to individuals clearly within the confines of federal sovereignty—Washington, federal territories, and the military.³⁶⁰ The \$1500 would allow the vaccine institution to continue maintaining a vaccine supply to the benefit of the entire nation while avoiding the Constitutional concerns raised by Pickering, Webster, and Atherton. There was no doubt that Congress could provide for the welfare of the military and residents of federal territories. A House committee praised Dr. Smith for his efforts as National Vaccine Agent and agreed that the vaccination of the military was dictated by duty and interest.³⁶¹ However the committee decided that military vaccination may be readily accomplished through the surgeons of the Army and Navy, without subjecting the government to the expense of paying Dr. Smith. Apparently the committee did not realize that it was Dr. Smith who had supplied the military with vaccine throughout the War of 1812 and continued to supply them afterwards.³⁶² The Board of Managers of Smith's vaccine institution noted that military surgeons were not well placed to maintain supplies of vaccine given their other duties. They were simply too busy and mobile. Smith's institution had supplied the military with vaccine for years.³⁶³ The committee did not even address the needs of residents of federal territories and flatly rejected Smith's petition. After this latest rejection, an angry James Smith refused to provide military surgeons with vaccine until some financial support for his vaccine institution was offered. This was immediately ordered by the Honbl. Secretary of War, and after receiving payment from the Army, Dr. Smith resumed supplying Army surgeons with vaccine.³⁶⁴

³⁶⁰ See James Smith, Memorial to Congress (Jan. 10, 1818) in SMITH, PROSPECTUS, *supra* note 54, at 29-31.

³⁶¹ Report of House Committee (Feb. 3, 1818) in SMITH, PROSPECTUS, *supra* note 54, at 31-32.

³⁶² See *supra* text accompanying note 305.

~ See BOARD OF MANAGERS, *supra* note 152, at 4. The Army continued its practice of compulsory vaccination after the 1813 Act was repealed. See H. DOC. No. 19-90 (1826). It is not clear for how long after the repeal of the 1813 Act they continued to obtain vaccine from Dr. Smith.

~ Letter from James Smith to Senator Horsey, *supra* note 249, at 6-7.

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D. Incorporating a Charitably Funded Vaccine Institution

After five years of repeated funding rejections from Congress, Smith adopted a new strategy; he decided to raise private charitable funds for his National Vaccine Institution. In the spring of 1818, he published a Prospectus of a Permanent National Vaccine Institution.³⁶⁵ Dr. Smith offered memberships, or subscriptions, of \$10 to physicians. Memberships would support the continuing operation of the institution and guarantee physicians up to five years of unlimited vaccine.³ Dr. Smith estimated that he needed 500 subscriptions, i.e., \$5000, to continue in operation.³⁶⁷ He also solicited donations which were to be used to erect a permanent building for the vaccine institution in Washington³⁶⁸ and establish a permanent endowment for the institute. Smith posted a \$40,000 bond payable to the President to guarantee that he would abide by his proposal and return all the donations and subscriptions if he was unable to implement his plan.³⁶⁹ He asked the public to consider his institution as convenient [as] national Telegraphs stationed at every post office, since it would deliver vaccine quickly to any post office in the country where an epidemic threatened.³⁷⁰

To jump start his ambitious plan, Dr. Smith hired a number of agents in 1819 and sent them into neighboring states to widely disseminate vaccine and collect subscriptions and

³⁶⁵ SMITH, PROSPECTUS, *supra* note 54.

³⁶⁶ See SMITH, PROSPECTUS, *supra* note 54, at 5.

³⁶⁷ See *id.* at 5-6.

³⁶⁸ By 1818 Smith recognized the need to move his institution from Baltimore to Washington, the seat of the national government. *Id.* at 28-29. Though Smith focused on the ability to distribute vaccine throughout the country via legislators returning home, clearly he must have understood that an institution in Washington was more likely to gain national support. Vaccine distribution, after all, was largely accomplished through the mail.

³⁶⁹ See *id.* at 6-7; Smith, Report, *supra* note 144, at 1. The endowment money would be patriotically invested in U.S. government bonds. See SMITH, PROSPECTUS, *supra* note 54, at 6.

³⁷⁰ See Affidavit of William Brent, Clerk of Circuit Court for District of Columbia in SMITH, PROSPECTUS, *supra* note 54, at 8.

³⁷¹ Smith, Report, *supra* note 144, at 6.

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donations.³⁷² In his 1821 report to Congress, Smith lists twenty-one agents, eleven of whom were still active.³⁷³ These agents traveled through Pennsylvania, Delaware, Maryland, Virginia, Kentucky, and North Carolina.³⁷⁴ According to Smith, he supplied these agents with horses, stationary, and vaccine at his own expense.³⁷⁵ They were directed to vaccinate the young and the old, the rich as well as the poor and distribute vaccine to all who asked free of charge.³⁷⁶ Smith hoped that such generosity would attract subscriptions and donations to his vaccine institute. The agents organized mass meetings of a hundred or more people at which they praised vaccination and offered free vaccination.³⁷⁷ Smith estimates that the efforts of his agents resulted in the vaccinations of some 100,000 persons in 1819 and 1820.³⁷⁸ His agents also collected funds for the institute, keeping 20% for themselves as the cost of collection. As of January 1, 1821, Smith reports receiving pledges of \$23,125 in subscriptions and \$12,509 in donations.³⁷⁹ But the pledges totaled \$35,634, he had only managed to collect \$ 14,460.³⁸⁰ After deducting 20% in collection costs, he was left with about \$11,500 (\$130,000 adjusted for inflation).³⁸¹ Given that the combined population of the six states at the time was only 2.8

³⁷² See *id.* at 2. Smith, apparently, began a couple of years earlier with one agent sent to Pennsylvania with the primary purpose of finding healthy unvaccinated individuals in order to maintain the vaccine supply. See SMITH, TWO LETTERS, *supra* note 78, at 32.

~ See Smith, Report, *supra* note 144, at 11. ³⁷³ See *id.* at 3.

³⁷⁴ See *id.* at 2.

³⁷⁵ See *id.* at 6.

~ See *id.* at 7.

³⁷⁸ See *id.* at 8-9. Smith's estimate of 100,000 vaccinations seems quite reasonable. See *supra* text accompanying notes 312-314.

~³⁷⁹ See *id.* at 2-3. See also 7 ABRIDGMENT OF THE DEBATES OF CONG. 8 (1820) (representative reporting that as of Jan. 1, 1820 Smith had received \$26,000 in subscriptions).

³⁸⁰ See Smith, Report, *supra* note 144, at 2-3.

³⁸¹ See CPI Conversion Factors 1996, *supra* note 137.

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million,³¹² this was not a bad fund-raising effort. Smith, however, was very disappointed with what he thought was a poor showing.

Smith was increasingly confident private subscriptions would allow him to provide free vaccine, but he needed Congress to incorporate his institution.³⁸³ Incorporation would ensure the continuity of the enterprise after Smith's death and thus encourage contributions. Without incorporation, people were essentially giving money to Smith's personal estate. Though he had posted the bond to guarantee his faithful use of the donated funds while alive, the donated funds would revert to Smith's heirs upon his death. Incorporation by Congress would also imbue his efforts with the imprimatur of the national government and encourage contributions from the entire country.³⁸⁴ Smith probably did not seek incorporation in any state for fear that sectarian feelings would discourage people in other states from donating.

After choosing a board of managers, Dr. Smith's National Vaccine Institution formally petitioned Congress for incorporation.³¹⁵ A bill was introduced in the House in January 1820,³⁸⁶ but there was no consideration of the bill until Congress' next session.³⁸⁷ The bill would have incorporated the institution as a semi-public agency. Though no funding would be provided by the government, Congress could remove managers and officers of the institution for malfeasance or negligence, and the President had the authority to appoint new

382 See HISTORICAL STATISTICS, *supra* note 51, at 35-36 (series A199). This figure includes only the white populations of these states.

313 Incorporation was not freely available until the Jacksonian period; at this time incorporation required an act of a legislature.

~ Letter from James Smith to Senator Horsey (Jan. 26, 1821), *supra* note 249, at 8.

385 See BOARD OF MANAGERS, *supra* note 152.

~ See 35 ANNALS OF CONG. 891 (1819).

387 See 37 ANNALS OF CONG. 462 (1820); H.R. 35, 16th Cong., 2d Sess. (1820) (original on file with the National Archives: House Documents, Box 16A-B1, Original House Bills).

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managers.³⁸⁹ The institution was also required to make regular reports to Congress and to limit its activities to the prevention of smallpox.³ Otherwise the bill largely formalized Smith's previous proposals.³⁹⁰

After considerable debate on November 28, the bill was held over to a third reading on a 51-44 vote.³⁹¹ A few days later, there was a brief debate over the power of Congress to establish corporations which pervade the United States.³⁹² Some congressman wanted to make explicit that the institution was to be incorporated in Washington where Congress had clear authority to grant a corporate charter. Others felt that the very presence of such language was counterproductive and would imply that Congress had the power to incorporate an institution elsewhere. The issue was eventually dropped since Smith's institution was clearly intended for Washington, and the House passed the bill.³⁹³ In the Senate, the bill was reported without amendment by the District of Columbia Committee.³⁹⁴ Apparently there was at least some opposition to the bill in the Senate. In a letter to Senator Horsey dated January 26, Dr. Smith complains that does not understand why intelligent men [Senators], who represent a Numerous & enlightened people should feel themselves constrained to oppose this institution & indulge in the most pointed disapprobation of our views. ~ Smith mentions that there were no raging smallpox epidemics at the time.³⁹⁵ He also notes that many physicians were opposed to his institution for distributing vaccine to

³⁸⁸ See H.R. 35, ~ 2.

³⁸⁹ See *id.* ~% 2-3.

~ For example, the bill required Smith to offer \$10 subscriptions and post a \$40,000 bond, both of which he had already done. See H.R. 35, ~ 4; *supra* text accompanying note 366, 370.

~'~' See 37 ANNALS OF CONG. 462 (1820).

⁹⁹²⁷ ABRIDGMENT OF THE DEBATES OF CONG. 8 (1820)

i See *id.* at 8-9.

~ See 37 ANNALS OF CONG. 462 (1821).

Letter from James Smith to Senator Horsey (Jan. 26, 1821), *supra* note 249, at 5. at 7, 9.

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laypersons and taking business from the physicians.³⁹⁷ Dr. Smith also filed a lengthy report to Congress on February 16, 1821 to defending his institution.³⁹⁸ The extent or source of Senatorial opposition is difficult to gauge. No further action was taken on the bill in the session. Perhaps another attempt in the next session would have been successful, but the Tarboro tragedy intervened ending any hope of federal support for vaccination for almost a century.

VI. The Tarboro Scandal and the End of the Vaccine Act

After nine years of failed attempts to obtain funding for the Vaccine Agent, the Vaccine Act of 1813 was repealed altogether in 1822 in the wake of the Tarboro Tragedy. Dr. Smith accidentally caused a epidemic in Tarboro, North Carolina which eventually killed ten people. The underlying cause of the repeal of the 1813 Act is open to question. The Congressional rhetoric focused on federalism and anti-monopoly sentiment although Dr. Smith himself blamed conniving special interests. Perhaps the Tarboro incident provided the opportunity for long-standing opponents of the Act to achieve its repeal. However, it is more likely that the repeal was simply a politically expedient response to a deadly mistake. Representative Burton of North Carolina led the assault on the bill, and by all indications he was not motivated by ideology. Instead, Burton advanced his own political ends by appealing to the anger of his constituents. The repeal left the country without a reliable national source of vaccine until the rise of large pharmaceutical companies at the end of the century.

~ See Smith, Report *supra* note 144, at 7. ³⁹⁸ Smith, Report, *supra* note 144, at cover page.

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A. *The Fatal Accident*

On November 1, 1821, Dr. Smith appointed a Dr. Ward an auxiliary vaccine agent for Tarboro, North Carolina and sent him smallpox vaccine.³⁹⁹ Early in the year Dr. Smith had received an urgent request for vaccine from Plymouth, North Carolina.~ Apparently the disease had spread inland to Tarboro, less than fifty miles distant. However, instead of glass slides with cow-pox virus, Dr. Ward somehow received a paper flyer postmarked November 9 containing scabs of *smallpox*, not cow-pox.⁴⁰¹ The paper was marked in Smith's handwriting with Variol. an abbreviation of variolous, Latin for smallpox.~² Not recognizing the Latin annotation, Dr. Ward proceeded to inoculate his patients with the smallpox virus. Not surprisingly, Dr. Ward's patients suffered mild cases of small-pox; they had been variolated, not vaccinated. Unfortunately, the variolations instigated a small epidemic in the surrounding counties; by late winter, sixty people were afflicted and ten people had died.~³

Dr. Smith attempted to cooperate with Dr. Ward as best he could. Upon first hearing of the effect the vaccine had on Dr. Ward's patients, Dr. Smith suggested that perhaps the vaccine had transmuted in shipment into a new strain of small-pox, varioloid which had just been identified in Europe.~' After further communication with Dr. Ward,

's See Open Letter from Dr. Ward (Feb. 7, 1822), *supra* note 125, at 142. See also Letter from Lewis Condict, Member of House Committee of Vaccination, to Dr. Ward (June 7, 1826) in H. REP. NO. 19-95, at 4 (1827). The Condict letter claims that the vaccine was mailed on November 21;

'~ See Letter from James Smith to Senator Horsey, *supra* note 249, at 7.

~' See H. REP. NO. 19-95, at 2 (1827).

402 See Letter from Dr. Ward to Dr. Smith (Jan 28, 1822) in 3 VACCINE INQUIRER 122, 124 (1822), *supra*

note 125. Extensive amounts of correspondence regarding the incident and its aftermath are reprinted in

3 VACCINE INQUIRER 112-192 (1822), *supra* note 125.

403 See JOHNSON, *supra* note 121, at 736.

~ See H. REP. NO. 17-48 (1822).

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Smith realized that he had probably sent samples of small-pox to Dr. Ward by accident.⁶⁰⁵ He immediately sent one of his agent to the area to provide genuine vaccine and expertise. Fearing that he might have made similar mistakes in sending vaccine to other parts of the country, Smith widely distributed a circular in January 1822 warning physicians that the vaccine he had sent out in the past year might be tainted.⁴⁰⁷ Though obviously sent with the noblest of intentions, the circular caused a national uproar and lent great aid to the many skeptics and opponents of vaccination.⁴⁰⁸

The local community in North Carolina meanwhile was becoming understandably incensed with Dr. Ward for starting the epidemic. Ward complained that I have been much abused; have been charged, by some, of introducing it [smallpox] from lucrative motives; and, in addition to which, and worst of all, am accused of having received matter with the *Latin word* for small pox; and this has been magnified until it has become a serious charge.⁶⁰⁹ Dr. Ward's failure, as a physician, to recognize the Latin marking for smallpox was unforgivable.⁴¹⁰ Moreover, a trained physician should have been able to distinguish between a dried kine-pox pustule and a dried smallpox pustule. Dr. Smith expressed what must have been on the minds of many: If Dr. Ward had been at all conversant

⁴⁰⁵ See *id.*; Letter from James Smith to Speaker of House of Representatives (Feb. 4, 1822), H. DOC. NO.

17-57 (1822). Smith kept smallpox samples on hand in order to test the efficacy of his vaccine. See *supra* note 248.

⁴⁰⁶ See Letter from Dr. Hunter to James Smith (Jan. 19, 1822) in 3 VACCINE INQUIRER 120, 121 (1822), *supra* note 125.

⁴⁰⁷ See Affidavit of James Smith, *supra* note 117, at 6; the circular is reprinted in 3 VACCINE INQUIRER 125 (1822), *supra* note 125.

⁴⁰⁸ See, e.g., H. REP. No. 17-48 (1822) (committee decrying that incident had sowed doubt as to efficacy of vaccination and repeatedly reaffirming their faith in vaccination).

⁴⁰⁹ Letter from Dr. Ward to Dr. Smith (Jan 28, 1822), *supra* note 402, at 124.

⁴¹⁰ Dr. Ward later changed his story and claimed that there were no markings on the package from Dr. Smith. See Letter from Dr. Ward to Dr. Clendinnen (Feb. 21, 1822) in 3 VACCINE INQUIRER 143 (1822), *supra* note 125.

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with either the kine-pock or small pox scabs, he could not have failed to detect the mistake.⁴¹¹ The obvious strategy for Dr. Ward was to begin publicly shifting the blame to Dr. Smith. According to Smith, all of a sudden Dr. Ward began excit[ing] public prejudices against him.⁴¹² In a public letter, Ward asked those who, from the vilest prejudice, have heaped upon me much personal abuse, to desist since the whole affair was Smith's fault.⁴¹³ Ward questioned Dr. Smith's competence given his failure to eradicate the smallpox from Baltimore.⁴¹⁴ He also mentioned that a mysterious new strain of smallpox had appeared in Baltimore but left to the public's imagination the origins of this new disease and its connection to the Dr. Smith and the Tarboro Tragedy.⁴¹⁵ The most vociferous attack against Dr. Smith, his institution, and the Vaccine Act was, however, led by Representative Burton of North Carolina.

B. The Repeal of the Vaccine Act of 1813

Representative Burton wanted to eliminate not only Dr. Smith, but his Vaccine Institution.⁴¹¹ Even Dr. Ward agreed that the Vaccine Institution provided an enormous service to the nation and should not be abandoned: It is, however, my serious wish, that the National Vaccine Institution, as proposed by him [Smith], may be carried into effective operation, and that the citizens of the United States will not suffer it to languish in the

Smallpox in the Town of Tarborough, 1 VACCINE INQUIRER 45, 47 (1822), *supra* note 125. But it appears

that vaccination had not yet become common in that part of North Carolina. Dr. Ward reports that just 1% of his community had been vaccinated. *See* Open Letter from Dr. Ward (Feb. 7, 1822), *supra* note

125, at 140.

⁴¹² *The North Carolina Accident*, 3 VACCINE INQUIRER 111 (1822), *supra* note 125.

⁴¹³ Open Letter from Dr. Ward (Feb. 7, 1822), *supra* note 125, at 141.

⁴¹⁴ *See id.* at 140.

⁴¹⁵ *See id.* at 142.

⁴¹⁶ Hutchins Gordon Burton served as an Anti-Democrat representative from North Carolina between December 1819 and March 1824. His attacks on the Vaccine Institution in 1822 may have been political astute. He was elected Governor of North Carolina in 1824. *See* BIOGRAPHICAL DIRECTORY OF THE AMERICAN CONGRESS, 1774-1961, at 636 (1961) *also available as* H. DOC. NO. 85-442 (1961).

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consequence of one fatal mistake.⁴¹⁷ Ward only wanted to place all of the responsibility for the Tarboro Tragedy at Dr. Smith's feet. He suggested that perhaps Dr. Smith should be replaced as National Vaccine Agent. Representative Burton on the other hand was fond of calling Smith's institution a 'nuisance of the most dangerous kind.'⁴¹⁸ Burton claimed that Dr. Smith had 'slaughtered with indifference' citizens of North Carolina.⁴¹⁹

In the House debate over the repeal of the 1813 Act, Representative Burton alleged that something like \$45,000 had been drawn, by the agent [Smith], from different quarters of the Union and implied that the Act was 'taxing the people at large for the profit of the agent of vaccination.'⁴²⁰ Smith responded that he had never received so much money and had spent much more than he received on running his Institution.⁴²¹ Burton also challenged Smith's competence by noting that smallpox prevailed in Baltimore to an extent greater than in any part of the United States. While smallpox was prevalent in Baltimore in 1822, Baltimore was one of nations largest port cities and had a high rate of vaccination.⁴²² It is also doubtful that Baltimore suffered from smallpox significantly more than other large Eastern ports.⁴²³ Finally, Burton absurdly suggested that Smith had introduced small pox into the interior of the country, where in all probability, it would not have found its way for forty years, but for this agency. ⁴²⁴ All evidence indicates that Smith had only sent *vaccine* to the interior of the country. No one alleged that he had previously sent smallpox anywhere. If Burton is referring

⁴¹⁷ Open Letter from Dr. Ward (Feb. 7, 1822), *supra* note 125, at 142.

~ JOHNSON, *supra* note 121, at 736.

⁴¹⁹ *Id.* at 736.

⁴²⁰ 39 ANNALS OF CONG. 1638 (1822); Letter from James Smith to Senator Lloyd (Apr. 25, 1822), *appended to* H. Rep. No. 17-48 (1822).

⁴²¹ See Letter from James Smith to Senator Lloyd (Apr. 25, 1822) *appended to* H. Rep. No. 17-48 (1822).

⁴²² See *Smallpox in Baltimore*, 2 VACCINE INQUIRER 74 (1822), *supra* note 125.

⁴²³ See *supra* text accompanying notes 80-84.

⁴²⁴ 39 ANNALS OF CONG. 1635 (1822).

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to the coastal town of Tarboro, Smith turned his attention to that region of North Carolina only after smallpox had appeared there earlier in the year.⁴²⁵

On January 30, 1822, Representative Burton demanded that a select committee of the House be appointed to investigate Smith's negligence.⁴²⁶ A number of congressman who rose to praise Dr. Smith's integrity and professional talents and experience, but agreed that an investigation should be instituted. They felt that an investigation could only exonerate Smith.⁴²⁷ The House decided to wait for the results of an investigation by a group of Baltimore physicians.⁴²⁸ Within a couple of weeks, a select committee was appointed to look into whether the 1813 Act should be repealed. The committee's February 22 report was quite favorable to Dr. Smith.⁴²⁹ The committee decided that though an unfortunate tragedy had occurred, the benefits of vaccination were too great to repeal the 1813 Act. After cataloguing the successful efforts of various European governments at mandatory vaccination, the committee recommended that no changes be made to the 1813 Act.⁴³⁰ This favorable report led Representative Burton to demand in March that another select committee be appointed. He was clear that his object... is to repeal the law, or place the institution on a more respectable footing... the present agency was not only a nuisance, but a nuisance of the most dangerous kind.⁴³¹ Burton had himself appointed to this second committee and authored its April 13 report. Predictably, the report was harshly critical of Dr. Smith and reported a bill

⁴²⁵ See *supra* text accompanying note 400.

⁴²⁶ See 38 ANNALS OF CONG. 851.52 (1822).

⁴²⁷ See *id.* at 852-53.

⁴²⁸ See *id.* at 854. I have not found any other reference to this investigation.

⁴²⁹ See 39 ANNALS OF CONG. 1382 (1822); H. REP. NO. 17-48 (1822). This report is reprinted at 38 ANNALS OF CONG. 1130-33 (1822).

⁴³⁰ See H. REP. No. 17-48 (1822).

~ 39 ANNALS OF CONG. 1382 (1822).

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repealing the 1813 Vaccine Act.⁴³² In March, Smith offered to resign his commission so that the National Institution could continue to safeguard the nation's vaccine supply under a new Vaccine Agent but to no avail.⁴³³ The House voted to repeal the Vaccine Act on April ~ After considerable debate, the Senate concurred on May 2, 1822.~~~

Well before this time, the attacks against Dr. Smith had reached a fever pitch. In addition to attacks from Dr. Ward and Representative Burton, Smith's own circular had incited tremendous national outrage. There was speculation that Dr. Smith had purposely tried to start an epidemic in order to increase his sales of vaccine.⁴³⁴ Dr. Smith's commission was revoked by President Monroe on April ~ as a consequence of the violent prejudices against him.⁴³⁵ Dr. Smith himself blamed not Dr. Ward or Representative Burton so much as physicians opposed to his championing of lay vaccination and free certification of vaccinations by mail.⁴³⁹ Smith accused these physicians of using the scandal to raise a furor against the Act. According to Smith, 'Down with the vaccine agency' is the popular cry of these economic interests.⁴⁶⁰

There might have been some truth to Dr. Smith's suspicions. In addition to ad hominem attacks on Dr. Smith, Congressional opponents of the Vaccine Act did repeatedly

⁴³² See H. Rep. No. 17-93 (1822). This report is reprinted at 39 ANNALS OF CONG. 1544-45 (1822).

~ See Letter from Dr. Smith to Representative Sergeant (Mar. 20, 1822) reprinted in 4 VACCINE INQUIRER 151-52 (1822), *supra* note 125.

~ See 39 ANNALS OF CONG. 1640 (1822). The vote was 102-57.

~ See 38 ANNALS OF CONG. 440 (1822). An earlier effort to procedurally derail the repeal effort was defeated 29-9. See 7 ABRIDGMENT OF THE DEBATES OF CONG. 206 (1822).

~ See H. REP. No. 19-95, at 2 (1827).

⁴³⁷ See Letter from John Q. Adams, Secretary of State, to Dr. Smith (Apr. 10, 1822) in 4 VACCINE INQUIRER 178 (1822), *supra* note 125.

'~' 39 ANNALS OF CONG. 1637 (1822).

~ See Letter from James Smith to Senator Lloyd (Apr. 25, 1822) appended to H. Rep. No. 17-48 (1822);
supra text accompanying notes 291-295.

⁴⁴⁰ Letter from James Smith to Senator Lloyd (Apr. 25, 1822) appended to H. Rep. No. 17-48 (1822).

raise anti-monopoly and economic-freedom arguments. The Burton committee report was skeptical of an institution, clothed with the character of a lucrative monopoly or privilege.’ In the floor debate, another representative from North Carolina condemned the monopoly granted to the Vaccine Agent by his title and franking privilege: the exclusive circulation of [vaccine] matter through the country, to the destruction of that competition which is the life

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Another re

of trade and of profession. presentative claimed that the Agent’s monopoly discouraged other medical professionals from striving to maintain supplies of vaccine.⁴⁴³ On the other hand, a search of Congressional records both published and at the National Archives has not uncovered even one memorial from physicians complaining about the 1813 Act. Memorials were the primary means of lobbying Congress at the time. Perhaps the rhetoric in Congress was more ideological than representative of some narrow business interest.

The dominant theme of Burton and his allies was another time-honored mode of American political rhetoric—federalism. Opponents of the Act argued repeatedly that the 1813 Act was an inappropriate exercise of federal power. The main thrust of Burton’s committee report was that regulations for the preservation of the public health are questions of police, wisely committed to local government.⁴ Moreover, the report questioned

whether the General [i.e., Federal] Government can beneficially interpose for the furtherance of an object which seems in a peculiar manner to appertain to the municipal authorities in the several States, and which must, of necessity, be finally committed to the management and discretion of professional men possessing the confidence of the community.⁴⁴⁵

’H. Rep. No. 17-93 (1822).

442 39 ANNALS OF CONG. 1636 (1822) (statement of Rep. Edwards).

~ *See id.* (statement of Rep. Eustis).

H. REP. NO. 17-93 (1822). *’Id.*

The committee doubted whether Congress can, in any instance, devise a system which will not be more liable to abuses in its operations, and less subject to a prompt and salutary control, than such as may be adopted by the local authorities.~' Burton trotted out his federalism arguments again in the floor debates. Vaccination was. .. not properly within the province of this Government but of the several States.⁴⁴⁷ Burton proceeded to compare the despotic power exercised by governments in Europe in insisting on compulsory vaccination and the limited role of the American government which can only let the people. .. take care of themselves.⁴⁴⁸ Representative Eustis felt that This government. .. was instituted to collect revenue, to provide for the public defense, and pay the public debts and little more.⁴⁴⁹ Certainly the power to spend money to preserve the vaccine supply was not granted Congress in §

While it is certainly possible that anti-monopoly and federalist concerns did indeed play a prominent role in the repeal of the Act, I am tempted to conclude that the rhetoric of economic freedom and federal power was little more than rhetoric. The leading opponent of the Act, Representative Burton of North Carolina, had made his goal of punishing Dr. Smith clear from the beginning. His vociferous ad hominem attacks seem less motivated by Constitutional policy than by the anger of his constituents in North Carolina. Moreover, supporters of the Act did not directly respond to Burton's federalism and laissez-faire arguments. Supporters focused on either defending Dr. Smith's integrity and competence or on the need to continue the Institution under new leadership.⁴⁵⁰ The supporters of the Act

⁴⁴⁶ *Id.*

44739 ANNALS OF CONG. 1634 (1822).

~ *Id.* at 1635 (1822).

~ *Id.* at 1640 (1822).

⁴⁵⁰ See U.S. CONST. Art. I, ~ 8.

~ 39 ANNALS OF CONG. 1636-40 *passim* (1822).

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might have been fully aware that Burton's policy arguments were simply a convenient cover for his political objective. In any case, the Act was repealed in the span of three months, almost as quickly as it had been passed.

C. *The Fate of Dr. James Smith and his National Vaccine Institution*

Smith launched a large public relations campaign to defend the practice of vaccination, restore his good name, and revive support for his institution. He printed and distributed an announcement within a week of the Act's repeal.⁴⁵² He reassured the public that even without his franking privilege his institution would continue as before.⁴⁵³ He promised to continue distributing vaccine freely and went as far as to say he would never charge for it.⁴⁵⁴ He also remained committed to building a permanent vaccine institution based on private contributions as outlined in his 1818 *Prospectus*.⁴⁵⁵ Smith even argued that Congress' reaction to the Tarboro Tragedy proved that the public welfare required an institution independent of the government and its political whims.⁴⁵⁶ Smith also put out five issues of a journal, *The Vaccine Inquirer*, allegedly published by a Society of Physicians of Baltimore.⁴⁵⁷ In the *Inquirer*, Smith published, unedited, numerous documents associated with the Tarboro Tragedy hoping to set straight the record as to his role in the Tarboro Tragedy. Apparently he had permanently lost the public confidence because he reports running out of funds in 1824 and having to retire in some measure, from the contest against smallpox.⁴⁵⁸

⁴⁵² See SMITH, THE NATIONAL VACCINE INSTITUTION, *supra* note 171.

~ See *id.*

~ See JAMES SMITH, THE BALTIMORE VACCINE CATECHISM 17-22 (1824) (on file with Countway Rare

Books: Pamphlets on Small-pox, No. 21).

~ See SMITH, THE NATIONAL VACCINE INSTITUTION, *supra* note 171.

See *supra* text accompanying

notes 365-371.

⁴⁵⁶ See *id.*

~ See THE VACCINE INQUIRER (Baltimore, 5 Issues, Feb. 1822 - June 1824), *supra* note 125. The contents

of the Vaccine Inquirer make clear that Smith was the actual publisher of the journal.

⁴⁵⁸ James Smith, Memorial to Congress (1824) in 5 THE VACCINE INQUIRER 205, 212, *supra* note 125.

Smith eventually went so far as to publicly allege that a Small Pox Plot was behind the Tarboro Affair.⁴⁵⁹ He began insisting that the Tarboro incident was not an accident at all but the malicious act of some unnamed conspiracy.⁴⁶⁰ At Dr. Smith's request a Congressional committee investigated the affair for three years and seemed to credit much of Dr. Smith's account.⁴⁶¹ Smith also claimed that during this Congressional investigation, Certain manuscript papers of considerable volume, relating entirely to the vaccine institution, and of no other value were stolen.⁴⁶² Based on these allegedly nefarious actions, Dr. Smith repeatedly petitioned Congress over the following three years to restore his appointment as National Vaccine Agent and his franking privilege.⁴⁶³ In 1824, the Congressional investigative committee even reported a bill to restore Smith's appointment and franking privilege,⁴⁶⁴ but no significant action was taken on the bill.⁴⁶⁵

Ultimately Dr. James Smith and his Vaccine Institution passed from the public consciousness. There is no mention of Dr. Smith in Congressional records after 1827. We know that the Institution did not survive, because plans for a national vaccine supply were proposed to Congress in 1838 and 1882. Congress failed to give serious attention to either

~ See SMITH, CATECHISM, *supra* note 454, at 20.

⁴⁶⁰ See Affidavit of James Smith, *supra* note 117, at 5-7.

⁴⁶¹ See H. REP. No. 18-78, at 2 (1824) (select committee did not see as much reason for imputing its willful commission to those who were publicly engaged [Smith]... as to some secret hand...); H. REP. No. 19-95, at 2 (1827) (particularly suspicious of the eight day gap between when the circular was addressed and when it was postmarked, given Dr. Smith's habit of immediately mailing packages of vaccine). Dr. Ward did not respond to repeated inquiries from the Congressional investigative committee. *Id.* at 2.

⁴⁶² Affidavit of James Smith, *supra* note 117, at 5-7.

⁴⁶³ See 40 ANNALS OF CONG. 576 (1823); H. REP. No. 18-78 (1824); Letter from James Smith to John Taylor, Speaker of the House of Rep. (Dec. 19, 1825) *in* H. REP. NO 19-95 (1827).

~ See H. REP. No. 19-95, at 3 (1827). The bill is reprinted at 5 THE VACCINE INQUIRER 217 (1824), *supra* note 125.

⁴⁶⁵ The bill was reported and read twice on Feb. 9, 1824. See 41 ANNALS OF CONG. 1740 (1824). The

1823 petition to reinstate his franking privilege was rejected as inexpedient. 40 ANNALS OF CONG. 643 (1823). The 1825 petition was never acted upon.

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proposal. We imagine him dying in 1841, a rather tragic figure—decades of efforts to maintain a national vaccine supply harshly repudiated by his country after one fatal accident without any credit for the thousands of lives he had probably saved.

VII. Epilogue: Proposals After the Tarboro Tragedy

While the Tarboro Affair does not appear to have shaken public confidence in vaccination,⁴ it did seem to leave Congress with a disinclination to get involved in the vaccine business. For eighty years after the Tarboro Tragedy, Federal support for vaccination was limited to areas of special federal responsibility such as the military,⁷ 'indians,' and Washington.⁴⁶ The problem of maintaining a national supply of vaccine was never seriously addressed again in the 19th century and remained an impediment to the eradication of smallpox in the United States. Congress seriously considered smallpox vaccine again in the Progressive Era enactment of the Biologics Act.⁴⁷⁰ Two 19th century proposals were never given serious attention by Congress.

In 1838, a physician from Connecticut, Dr. Sylvanus Fansher, petitioned Congress to establish a national vaccine institution for the particular benefit of the Army, Navy, and Indians who were suffering greatly from smallpox.⁴⁷ Dr. Fansher had apparently been practicing vaccination since 1801 and managed his own Connecticut Vaccine Institution.⁴⁷² Not much had changed in fifteen-odd years. Dr. Fansher noted that It is generally

See H. Rep. No. 19-95, at 1 (1827).

⁴⁶⁷ See Letter from Jonas Lovell, Surgeon General, U.S. Army to James Barbours, Secretary of War,

H. DOC. NO. 19-90 (1826) (mandatory vaccination in Army since 1818).

⁴⁶⁸ See 4 Stat. 514 (1832) (authorizing payments of \$6 per day for doctors who were vaccinating Indians; the Secretary of War was obligated to provide these doctors with genuine vaccine).

⁴⁷ See H. REP. No. 20-2 15 (1828) (Congressional authorization of Board of Health for the city and approval of general vaccination in Washington during smallpox outbreak).

~ The Biologics Act, ch. 1378, 32 Stat. 728 (1902), 42 U.S.C. ~ 41-48 (1997) (repealed 1944).

~' See FANSHER, *supra* note 141.

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understood... that the difficulty of procuring the pure vaccine virus and perpetuating it had ever been the greatest impediment to the practice of vaccination.⁴⁷³
The national vaccine

institution he proposed would, of course, maintain a supply of vaccine for the entire country even though ostensibly targeted at the military and Native populations. Either through ignorance or perhaps political adroitness, Fansher does not mention Dr. James Smith and the 1813 Act. Dr. Fansher does not explicitly ask to be named head of the national vaccine institution, but he does describe at some length his dedicated charitable vaccination services, particularly to the military over the past decade.⁴⁷⁴ There is no record of substantive Congressional consideration of the proposal.

The next and final 19th-century effort, which I am aware of, to establish a national vaccine supply was in 1882 during an epidemic in the West. Separate bills were introduced in the House and Senate⁴⁷⁵ motivated by many communications from physicians all over the West regarding the difficulty of obtaining pure vaccine.⁴⁷⁶ The problems faced by physicians at the beginning of the century had not been solved. Vaccine contaminated with other viruses remained an enormous problem: some of the vaccinations have been shown.. to have left the people with diseases not very desirable.⁴⁷⁷ A House select committee unanimously recommended a bill which appropriated \$15,000 to maintain a national vaccine supply.⁴⁷⁸ The bill directed the recently constituted National Board of Health to provide pure vaccine virus to all who request it, at cost. The focus of the bill was not on providing free vaccine, but a

⁴⁷² See *id.* at 2.

~ *Id.* at 2.

~ See *id.* at 2-12.

~ See S. 1004, 47th Cong., 1st Sess. (1882); H.R. 2231, 47th Cong., 1st Sess. (1882); see also H. Rep. No. 47-607 (1882).

⁴⁷⁶ See 13 CONG. REC. 862 (1882).

~ See *id.*

~ See 13 CONG. REC. 862 (1882).

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reliable source of vaccine. A suggestion that the bill have a time limit was rejected since the bill would cost the government little and the vaccine supply should be permanently maintained for future epidemics.⁴⁷

Unlike the debates between 1813 and 1824, there was significant opposition expressed based on a *laissez-faire* vision of government. Senator Maxey argued: Why Congress should be buying vaccine virus any more than quinine or anything else? I do not understand what we have to do with the question. . . . this is converting the Government... into an apothecary's shop, to be dispensing out medicines all over this whole country.⁴⁸⁰ Even senators in favor of the bill agreed that It is true as an original proposition that the Government has not any business to be furnishing vaccine matter or quinine, or anything else.. .~ Supporters did not try to rebut the *laissez-faire* norm expressed by Senator Maxey. Instead, supporters argued that the government was not giving away vaccine for free but selling it at cost.⁴⁸² *Selling* vaccine at cost, they argued, did not violate *laissez-faire* norms; only giving vaccine away at government expense was inappropriate. Also unlike the Congressional debates between 1813 and 1824, there was no discussion of the federalist questions. Though the bill passed the Senate, it was never considered by the House.⁴⁸³ After the Civil War, the weight of political rhetoric had clearly shifted from federalism as a restraint on Congressional power to *laissez-faire* norms of limited government. Because the 1882 record is so sparse, it is difficult to analyze whether Congressional opposition to the federal vaccine production was sincerely based on a *laissez-faire* ideology, or whether, as in earlier periods, ideological rhetoric was used to legitimate other political interests.

~ See *id.*

480 See *id.*

481 See *id.*

482 See *id.*

VIII. Conclusion

At the dawn of the 19th century, vaccination held out the potential of eradicating a major cause of death and disruption in American life. Compulsory vaccination, the obvious solution adopted by Continental Europe, was probably not an option given early American distrust of government and commitment to liberty. Yet, there was much that governments could have done short of compulsory vaccination to reap the blessings of this astounding medical advance. Vaccination of the poor could have been subsidized, and vaccine institutions could have been established to maintain a pure, uncontaminated supply of vaccine. The opportunity to save tens of thousands of lives was met by almost total indifference by state governments. Perhaps for the first time in the nation's history the intervention of the national government was essential to protect the health of the populace, but even the federal government withdrew from the field after the Tarboro Tragedy.

American government inactivity in the face of smallpox's death toll is difficult to explain under any of the dominant narratives of legal history. The *salus populi* argument is most obviously undermined by the failure of governments to treat the welfare of the people as the supreme law. Arguments of *laissez-faire* capitalism are simply absent from the debates over vaccination between 1809 and 1827. While arguments of federalism were raised repeatedly in Congressional debates, they do not appear to have been sincerely advanced. Federalism appears instead to have been simply a convenient cover for other political interests or just another argument in the debate, not an absolute bar to the enactment of comprehensive legislation. Besides, the inactivity of state governments indicates that something more than federalism was afoot. The business subsidy and public choice theories provide the best explanations for the course of events, but neither on its own can explain the basic

483 *See id.*

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contradiction in Congress' response: Why did Congress so easily provide a franking subsidy to the Vaccine Agent, but refuse so adamantly to fund his efforts directly? We are left with little more than the historical fact that legislatures were reluctant to spend money.

Nonetheless, the Vaccine Act of 1813 was a dramatic legislative innovation. Congress endorsed the efficacy of a drug and the benefits of a public health program for the first time. Congress also recognized the need for an authorized, semi-public national source for a drug. Physicians and the public could be confident in the authenticity of Smith's vaccine backed as it was by the authority of the national government. Had the Act not been repealed in 1822, Dr. Smith probably could have raised enough money from charitable contributions to continue without government financial support. The lack of public funding, while providing a historical puzzle, appears to have been a surmountable issue. The Vaccine Act of 1813 had given him the national stature to attract donations from across the young nation. If the Tarboro Tragedy had not interfered or had Dr. Smith had the public support to weather the scandal, his National Vaccine Institution could have saved tens of thousands of American lives.